



AEG'S 2019

# SUSTAINABILITY REPORT







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NBA All-Star Game, L.A. LIVE in Los Angeles, CA

## About AEG

From epic concerts to premier music festivals to heart-stopping sporting events, AEG has been giving the world reason to cheer through unparalleled live events that create unforgettable memories for more than 20 years.

As the world's leading sports and live entertainment company, we operate on five continents, entertaining more than 100 million guests annually through our network of over 150 venues worldwide.

We focus and coordinate the specialized skills of each of our key divisions into a powerful aggregated resource that has played a pivotal role in transforming the sports and live entertainment industry.

- AEG Facilities owns, manages or consults with a network of premier arenas, convention centers and stadiums, including more than 20 of the top 100 venues in the world.
- AEG Presents is one of the largest live music companies promoting more than 10,000 shows including global and regional concert tours; operating more than 80 music venues; and producing more than 40 world-renowned music festivals.
- AEG Sports is the world's largest operator of sports franchises and high-profile sporting events.
- AEG's Global Partnership division was voted "Best in Property Consulting, Sales and Client Services" by the Sports Business Journal for 2017 and 2018 and delivers more than 1,000 corporate brand partners the largest sports and live music marketing network in the world.
- AEG's Real Estate division oversees all aspects of real-estate development for the company's world-class venues and entertainment districts, as well as providing consulting services on numerous other projects.

More information about AEG can be found on our website at [www.aegworldwide.com](http://www.aegworldwide.com).





## About AEG 1EARTH

AEG 1EARTH is AEG's industry-leading corporate environmental sustainability program now in its second decade of operation. AEG 1EARTH helps us reduce our company's environmental footprint and raise public awareness about important issues facing our industry, communities and planet. By measuring our environmental footprint and collecting operational data from our global network of sports and entertainment venues, we set material and science-based goals against which we review our annual performance.

The AEG 1EARTH program is managed by a dedicated team at our corporate headquarters in Los Angeles, California and is implemented by our management and employees throughout the world. While we value our global footprint, we understand that change happens on a local level and that everyone plays a role in environmental sustainability. We encourage our employees to actively participate in our initiatives and constantly seek ways to inform guests that attend our events how they can do their part. Our program is designed to encourage the sharing of best practices in order to forge a more sustainable future. We seek feedback from our customers, partners, vendors and employees because we believe that through consistent and robust dialogue, we can work together to improve the health of our planet.



## 2018 by the Numbers

1,000,000 gallons restored

35,883 metric tons CO<sub>2</sub>e reduced in one year

32 new AEG 1EARTH Ambassadors

2x increase in water stress in one year

At least 6,900,000 fewer plastic straws each year

56% of waste diverted from landfill

8,595,000 kilowatt hours of solar power generated

35,700 meals donated



## Letter from the President & CEO

At AEG, people are at the heart of our business. They are also at the heart of our sustainability practice because we believe that we can drive meaningful environmental change through the choices we make and the actions we take.

Annually, AEG hosts more than 100 million visitors at our entertainment districts, arenas, stadiums, clubs, theaters and convention centers around the world. Guests expect us to be responsible corporate citizens, and we believe we need to earn their respect through our actions, because for us sustainability is about creating the conditions that allow people and communities to thrive.

Since last year's Anniversary Spotlight which focused on three of our most important properties, L.A. LIVE in Los Angeles, The O<sub>2</sub> in London, and Mercedes-Benz Arena in Berlin, we have taken major steps toward realizing our long-term vision at these locations and laid a foundation for our sustainability activities for the future.

For the past ten years we have been intimately involved in enhancing Figueroa Street, a neglected corridor in downtown Los Angeles and the main traffic artery serving L.A. LIVE and the STAPLES Center. We are very pleased to announce that this past August, the MyFigueroa project was completed and today the street better serves the needs of pedestrians, bicyclists, transit riders, and drivers alike. Multi-modal streets like the MyFigueroa project continue to be a key component of our vision for urban renewal in Los Angeles and elsewhere.

In October of 2018, we opened ICON Outlet at The O<sub>2</sub>, a 210,000 square foot premium shopping destination that is adjacent to the world's #1 entertainment arena. Urban outlets tend to be located outside of major city centers, however, ICON is just 15 minutes from central London and easily accessible by multiple transit modes. I am proud to report that the project is on track to achieve BREEAM certification and will be the first major retail development in the UK to earn this distinction.

Also, last October, in Berlin, Germany, we celebrated the opening of the Mercedes Platz, our newest entertainment district. This project is the result of a long-term commitment we made to the city nearly 20 years ago and has all the components we look for when evaluating where we should build—a neglected or blighted inner city area that is centrally located, good access to public transportation and high potential for urban restoration. With the Mercedes-Benz Arena as the anchor, the new entertainment district includes the 4000-seat Verti Music Hall, bars, restaurants, a bowling alley, cinemas and office and residential space. The arena and Platz are expected to see over five million visitors each year and create 1,500 new jobs.

These three iconic projects demonstrate both the viability of our business model, as well as our commitment to making a positive impact on the communities where we operate. That is why we continue to look for ways where we can operate responsibly and reduce our environment footprint be it decreasing our carbon emissions, water consumption or waste.

In this year's report, you will read about several initiatives we completed, some big, some small, but all in service of making sure that we are doing our part to protect the planet for future generations. We are particularly proud that AEG will be one of the first companies to adopt a greenhouse reduction goal that's based on the 1.5° C global warming limit recommended by the Intergovernmental Panel on Climate Change (IPCC). We are also very proud that last year, we launched our AEG 1EARTH Ambassadors Program, a voluntary sustainability advocacy program focused on expanding our employees' knowledge and impact at both at work and in their communities.

We strive to continue leading our industry and recognize that sometimes we need to take a moment to listen and understand issues that are most material to our stakeholders and business. That is why last year, we began re-assessing our service models and addressing the use of single-use plastics in our operations. We have made good headway in reducing the usage of plastic straws at our venues and events and are piloting new projects to reduce single-use cups and other single-use items.

While we are very pleased by the progress we have made to date, we recognize that much more needs to be done. Although, none of this work is easy, it's necessary and it makes us a better, more innovative company.

We hope you enjoy this year's Sustainability Report and look forward to sharing more with you as we continue in our journey.

Sincerely,



Dan Beckerman





## Letter from the Vice President, Energy & Environment

Thank you for your interest in AEG's eight sustainability report. This is the sixth report I've had the pleasure to work on and I look forward to this time each year because it offers me an opportunity to reflect on the past year's events. What stands out most is that

2018 was a big year for sustainability both within our company and outside of it. If I had to sum up the year, it would be the United Nations' Intergovernmental Panel on Climate Change's (IPCC) report and the focus on single-use.

In October, the IPCC released its latest report on global warming, which recommended that global warming should not exceed 1.5° C and stated that while the 1.5° scenario is still possible, it will require "unprecedented" changes across the globe. While not unexpected, the report's conclusions are both frightening and daunting. Yet despite painting a grim picture, the report does tell us what we need to do as a global society: reduce emissions 45% by 2030 and become carbon neutral by 2050.

With those targets as a roadmap, I'm proud to announce that our company has accepted the challenge and revised its 2020 Environmental Goals to meet the more aggressive objectives. While we're still focused on 2020, the next stop will be 2030 and our commitment to at least a 45% reduction in our overall carbon emissions.

With regards to single-use, who would have thought that the lowly plastic straw would be the lightning rod to finally spur action on single-use plastics? In my opinion, the straw debate single-handedly did more to move the sustainability field forward than any other issue. In reading through this report, you'll learn what we've done and continue to do to reduce our dependence on single-use plastics. I hope that you, as I have, assess your use of single-use plastics. You may find yourself shocked at how dependent on these items you are, but also by how many better alternatives are now available.

Creating lasting change starts with a committed team, and I want to extend a sincere thank you to my Energy and Environment colleagues. Without their hard work this report and our program would not be possible. I also want to thank AEG's global family of employees for their continued support of our program and initiatives.

We believe in empowering our employees and educating them about sustainable best practices in order to advance our mission to safeguard the environment. Our new AEG 1EARTH Ambassadors Program is a perfect example of this commitment. Last year, to celebrate the 10th anniversary of AEG 1EARTH, we launched our Ambassadors Program to incentivize our employees to learn more about sustainability practices that they can adopt personally, as well as to champion sustainability within their department or business division. Thanks to this program, we are better understanding the true extent of our sustainability impact and better equipping our employees to help amplify our collective contributions.

As you will see from the following pages, our path to sustainability is a shared endeavor, touching all levels of our organization in all corners of the globe. I hope you enjoy this year's Sustainability Report and please know that we would love to hear your thoughts. Feel free to email us at [aeg1earth@aegworldwide.com](mailto:aeg1earth@aegworldwide.com) or check us out on Twitter: @AEG1Earth.

Regards,



John Marler



## Our Path to 2020 and Beyond: A Sense of Urgency

In our 2016 report we announced our adoption of a science-based goal for reducing our greenhouse gas (GHG) emissions. We modeled that goal on “The 3% Solution,” a report from the World Wildlife Fund and the Carbon Disclosure Project, which concluded that the US corporate sector should reduce emissions by approximately 3.2% per year between 2010 and 2020. This rate was aligned with the level of decarbonization required to keep global temperature change under 2° Celsius.

Now, just three years later, we are changing our plan because of the United Nations’ Intergovernmental Panel on Climate Change’s (IPCC) “Global Warming of 1.5° C” special report issued on October 8, 2018, which addresses the impacts of a 1.5° global warming scenario versus a 2.0° scenario.

The report outlines that human activities have already caused approximately 1.0° C of global warming above pre-industrial levels. As a result, we have already seen a certain amount of damage to our environment, infrastructure, and health and safety. What the report explains, however, is that this damage will only increase if we reach a 1.5° level of warming, and that the risks of damage grow even larger at the 2.0° scenario. For example, extreme heat events are expected to be 2.6 times more severe under the 2.0° scenario than at 1.5°.

In order to achieve the 1.5° scenario, global net GHG emissions must decline by 45% from their 2010 levels by 2030, and GHG emissions must reach net zero by 2050. The report notes that achieving this level of carbon reduction would require “unprecedented” changes in our economies, lifestyles and habits. A challenge for sure, but one that AEG is up to.

We see the report as both a solemn warning and a clear roadmap for the future. As such, we have reassessed our existing 2020 Environmental Goal for GHG emissions, which is expected to reduce our emissions by 25% or better by 2020. Our adoption of the new 1.5° goal requires us to reduce our emissions by 33% from 2010 to 2020, and to follow IPCC’s guidance to reduce emissions by 45% by 2030 and 100% by 2050.

We believe adopting a science-based target that aligns with the 1.5° scenario is the right thing to do, but it’s not our only contribution to the fight against global climate change. We are committed to continuing to help draw attention to this serious issue and lead the way toward change by engaging and inspiring our global employees, guests, stakeholders and partners to do more to ensure the safety of our world.

## AEG'S 2020 ENVIRONMENTAL GOALS

### GHG EMISSIONS

#### **GOAL: REDUCE GHG EMISSIONS 4% EACH YEAR ACROSS ALL OPERATIONS FROM 2010 TO 2020**

Our science-based GHG emissions reduction goal is based on the 2018 "Global Warming of 1.5° C" report from the United Nations' Intergovernmental Panel on Climate Change (IPCC). The report recommends reducing global emissions 45% from 2010 to 2030 and achieving net zero emissions by 2050. Our current goal for 2020 reflects the level of reductions required to achieve these longer-term targets.



### WATER

#### **GOAL: REDUCE POTABLE WATER CONSUMPTION AT WATER-STRESSED SITES BY 4.4% PER YEAR**

We use the World Resources Institute's Aqueduct™ tool to categorize AEG operations in areas that are identified as having "high" or "extremely high" "overall water risk." For sites that meet this criteria, our goal is that they reduce potable water consumption by at least 4.4% each year. This equates to reducing consumption by a total of 20% in five years, a benchmark that we adapted from local city ordinances that identify their preferred levels of potable water conservation.



### WASTE

#### **GOAL: DIVERT 70% OF WASTE FROM LANDFILL ACROSS ALL OPERATIONS BY 2020**

Our operations generate a variety of materials that need to be taken off-site for disposal or additional processing. Our aim is to minimize the amount of material we send to landfills by implementing a "reduce, reuse, recycle" approach in order to lower our overall waste footprint and identify alternatives to landfilling and incineration wherever possible.



## Greenhouse Gas Emissions

In 2018, our operations resulted in the emissions of 167,416 metric tons of CO<sub>2</sub>e. This represents an 18% decrease from our 2017 emissions. This year, we are just 4% above our new revised 2020 Environmental Goal for GHG emissions, based on a 1.5° global warming threshold scenario.

A year ago, based on the 2.0° threshold scenario that we had in effect, we were 19% over our goal. We are pleased that we have made significant progress towards meeting our GHG emissions targets.

This change is due in large part to our decision to start purchasing additional renewable energy credits (RECs) - beyond our existing renewable energy and REC purchases - to offset the Scope 2 carbon emissions relating to our consumption of grid energy. As we noted in prior reports, our lack of progress has been due to our rapid growth. Despite our ongoing energy efficiency efforts, grid-based electrical supplies are not decarbonizing fast enough for us to meet our goals. RECs provide a way to support and access renewable energy, particularly at locations where there are no other feasible methods for directly procuring additional renewable energy.

In addition to adopting the more aggressive goal for emissions reduction and initiating new REC purchases, we made other adjustments to our carbon tracking and reporting process to ensure we are reporting as accurately and fairly as possible, so we can better gauge our progress toward 2020.

First, we operate a small number of facilities that purchase chilled water from third-party suppliers for cooling and other process uses. Since our last report, we discovered an error in the system that converts chilled water units into carbon emission units. As a result of this error, we have been systematically under-reporting our total carbon footprint by 4–13% each year, with the largest discrepancies in the early years, when the facilities using chilled water constituted a larger proportion of our portfolio emissions. We have corrected this error and as a result our total emissions have now increased from 2010 through 2018.

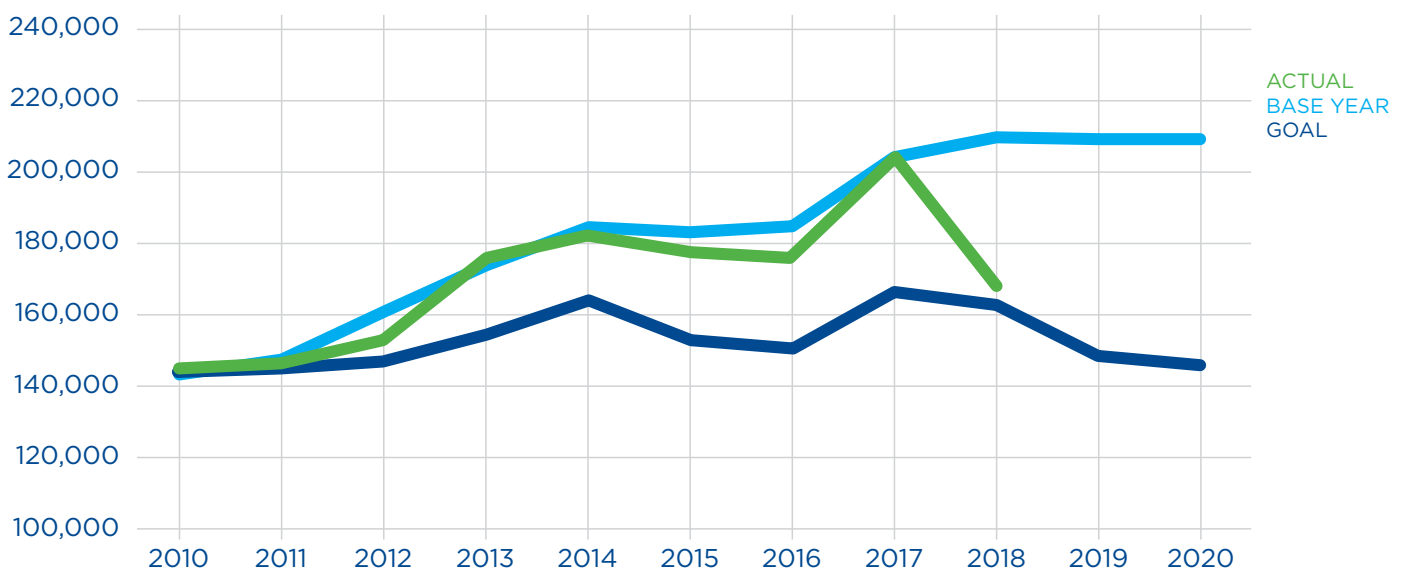
Second, we changed the emission factors that we use to calculate carbon emissions for our venues located in Australia. Historically we have used factors supplied by the International Energy Agency (IEA) which uses a single, country-specific factor to convert electric power units into carbon emissions. Through consultation with our advisors, we decided to adopt territory-specific emission factors provided by the Australian government, the National Greenhouse Account (NGA) factors. Our venues in Australia range from Sydney to Darwin to Perth and we believe it's important to use emission factors that are most reflective of the carbon intensity of the local electric power supplies. NGA factors are available going back to 2010, so we applied the NGA factors to all of our 2018 and historic electric power consumption data.

Third, we own or operate six arenas that host or have hosted National Hockey League (NHL) teams: the STAPLES Center, Gila River Arena, PPG Paints Arena, Barclays Center, and NYCB Live. For the 2014–2015, 2015–2016, and 2016–2017 seasons, the NHL and its partners procured RECs and carbon offsets to match and offset the impact of league games in those

arenas. Historically we have not accounted for the effective reduction in carbon footprint from this initiative but realized that in neglecting to account for them we were in effect overstating the carbon footprint of the arenas and publishing data that was not in line with the league's public reports. Through consultation with the NHL we have applied those reductions for the applicable seasons for the six arenas mentioned above.

With our more aggressive carbon target, we will need to step up efforts to use less energy and continue expanding our procurement and support of carbon-free renewable energy. We also will need to continue evaluating RECs and other structures, like green tariffs and power purchase agreements (PPAs), as tools to reduce our carbon footprint.

## 2020 GOAL PROGRESS - GHG EMISSIONS (metric tons of CO<sub>2</sub>e)



## ANNUAL GHG EMISSIONS (metric tons of CO<sub>2</sub>e)

YEAR	2010	2011	2012	2013	2014	2015	2016	2017	2018
Scope 1	21,472	20,833	23,284	28,299	28,231	29,269	36,384	38,106	40,472
Scope 2	120,772	125,822	132,052	149,028	155,536	149,728	142,074	165,193	126,944
<b>TOTAL</b>	<b>142,244</b>	<b>146,655</b>	<b>155,336</b>	<b>177,327</b>	<b>183,767</b>	<b>178,997</b>	<b>178,458</b>	<b>203,299</b>	<b>167,416</b>
Carbon Offsets	0	0	0	0	(438)	(1,240)	(2,432)	(1,448)	(1,481)

## Water

For this year's report we updated our potable water conservation goal. In the past, we targeted reducing potable water use 2.3% per year from 2010 to 2020 for sites identified as having "high" or "extremely high" water risk using the World Resource Institute's Aqueduct™ tool.

Since setting that goal in 2016 we realized that it was unfair to the sites subject to the goal, because we were tracking progress from 2010 forward but they were only put on notice as to the existence of the goal in 2016. Also, the original target, a 20% reduction in water use over a decade, was not supported by external guidance as to what level of reduction is scientifically necessary or technically feasible.

Starting with this year's report, we are now including sites in our potable water goal analysis starting the year they are identified as "high" or "extremely high" risk sites by Aqueduct™. We set the base level of water consumption during that year and then in the following years they should reduce consumption 4.4% each year as long as they remain as water-stressed sites. This reduction level is based on a 20% reduction in five years, which is a benchmark that we've adapted from local city ordinances that identify their legally meaningful levels of potable water conservation.

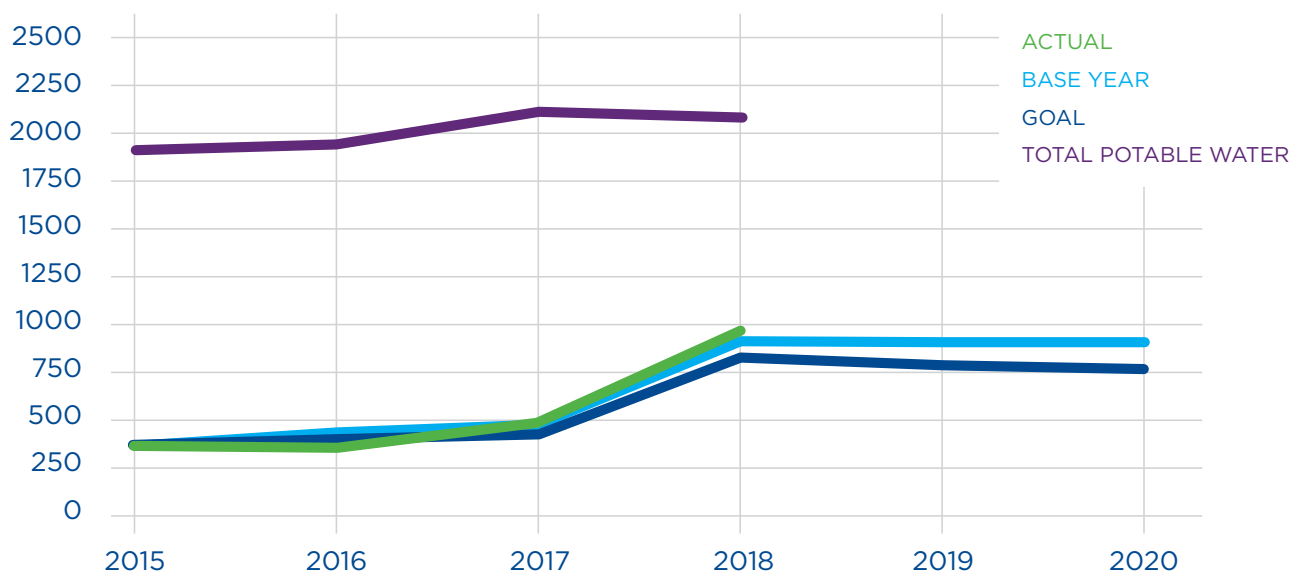
Before discussing the new goal framework, we note that our global potable water footprint decreased slightly, from 2,017 million liters in 2017 to 2,008 million liters in 2018. With the same amount of venues in operation in those two years, we see that as a positive trend toward lower water impact. Also, this year was the first year one of our sites purchased water restoration certificates,® with the LA Kings using their Earth Month recycling proceeds to purchase certificates to offset water consumption at the STAPLES Center Arena. This effort lowered our overall impact by adding water back into a local watershed.

With respect to our goal progress, the big news for this year is that we now have 24 sites that are identified as having high or extremely high overall water risk. The percentage of the water we use in water-stressed locations doubled, from 23% to 46%. This development is a wake-up call that no one can take water security for granted.

Results under our new, more aggressive water conservation goal are mixed. In 2016, we were ahead of target, however, consumption at water-stressed sites exceeded our goal levels by 8% in 2017 and by 11% in 2018. The main drivers in both years were the same: Dignity Health Sports Park in Carson, California, has been hosting an additional sports team, the National Football League's LA Chargers, and the Los Angeles Convention Center has attracted a high level of bookings.

While we continually look for opportunities to conserve water, our operational experience has shown us that water consumption can vary widely from year to year based on event counts, attendance figures, and ambient weather, among other factors. Looking ahead, we will continue to advocate for water-smart operational behaviors and investigate new ways to conserve and recycle water.

## 2020 GOAL PROGRESS POTABLE WATER USE AT WATER-STRESSED SITES (million liters)



## ANNUAL WATER USE (million liters)

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Potable Water	970	1,101	1,304	1,505	1,772	1,696	1,784	2,017	2,008
Recycled Water	147	137	165	149	197	221	184	129	127
<b>TOTAL</b>	1,117	1,237	1,470	1,654	1,969	1,918	1,967	2,146	2,135
Water Restoration Certificates	0	0	0	0	0	0	0	0	(4)

## PERCENTAGE OF POTABLE WATER IN WATER-STRESSED REGIONS (million liters)

	2015	2016	2017	2018
Potable Water	1,696	1,784	2,017	2,008
Water Stressed	395	411	458	933
% Water Stressed	23%	23%	23%	46%

NOTE: Our data quality assurance/quality control (QA/QC) efforts are ongoing. In preparing each annual report, we inevitably find errors, obtain missing data, and/or obtain better quality data as compared to the prior years' reports. For this reason, you will notice slight variations in the water generation data reported in this year's report compared to prior reports. We consider our most current published data our most accurate and reflective of our best

## Waste

AEG's company-wide diversion rate decreased slightly from 2017 to 2018, from 57% to 56%. Since 2014, our diversion rate has ranged between 54% and 58%. With only two more years until 2020, we will need to make significant improvements to achieve our target of 70% diversion by 2020.

Despite remaining essentially flat with regard to our diversion rate, we were encouraged to see that our total waste generation decreased 11% from 2017. We hope this is evidence that efforts at source reduction are paying off as we see across-the-board decreases in totals for waste to landfill, waste to energy, and recycled waste with the same number of venues reporting in 2018 as in 2017.

In 2018 we continued to see significant changes in the waste and recycling industry and shifts in public perception of waste generation and disposal. The most notable of these developments were the continued disruption of the global recycling market in the wake of China's "National Sword" policy and the growing outcry against single-use plastics.

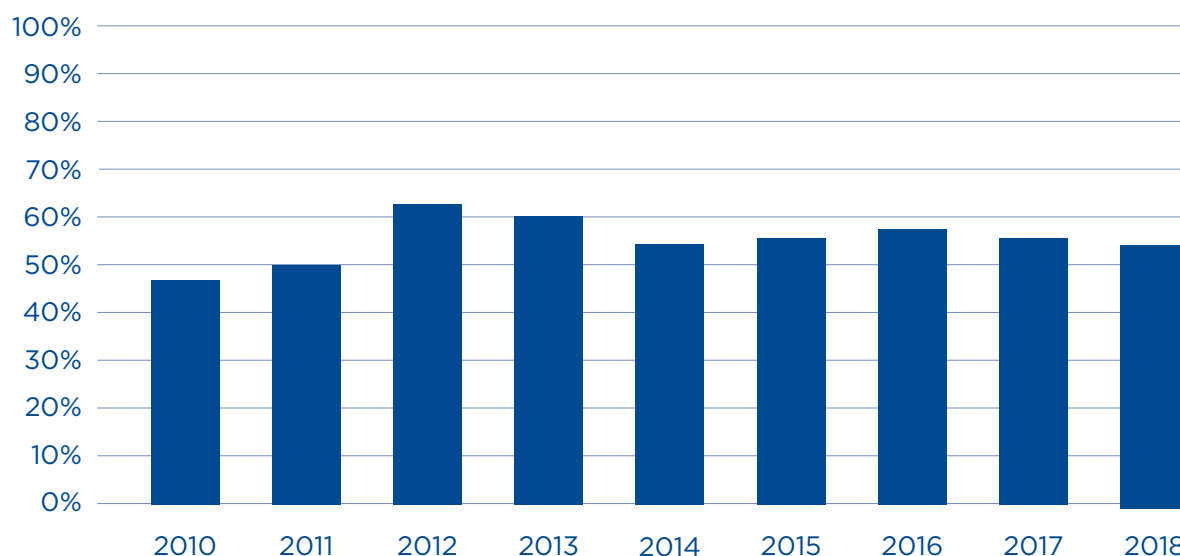
What has become apparent in the past two years is that what we have always thought of "recycling" was in large part just an export business, with countries like the U.S., UK, and Australia sending relatively poorly-sorted loads to less-developed countries for further processing. With the receiving countries now severely restricting the intake of those materials due to the negative environmental consequences associated with their importation, these materials are accumulating in their countries of generation, and are increasingly landfilled or incinerated.

The primary cause of this situation is poor sorting practices for so-called "recyclable" consumer goods. Although there's always room to improve people's bin-side sorting performance, our experience tells us that this can't be our sole strategy for achieving our 2020 Environmental Goal for waste diversion, because we have little confidence that recycling via public sorting is a scalable, sustainable waste management solution, at least for the items that make up the bulk of our waste stream, food and beverage serviceware.

As a result, we have embarked on a comprehensive campaign of source reduction with the hopes of reducing our reliance on single-use items designed for immediate disposal or intended for "recycling." A number of our venues and events updated their straw policies, changing to paper straws, making straws available only on request, or removing straws entirely. Additionally, we saw venues and festivals adding or expanding their water refill station capacity to encourage the use of refillable water bottles. We also saw venues begin piloting reusable cup programs that allow patrons to use the same cup throughout their evening and either keep the cup or redeem it at the end of the night.

For example, at Dignity Health Sports Park, in Carson, California, home of Major League Soccer's LA Galaxy, management instituted a new program to reduce dependence on single-use serviceware in the employee cafeteria. By switching to reusable dishes, to-go containers and reusable utensils, the stadium eliminated the use and disposal of 12,000 single-use paper to-go boxes and 20,000 plastic utensils. You will read about other examples later in this report and we hope to share similar success stories in the future as we continue to look for ways to reduce our waste footprint.

## 2020 GOAL PROGRESS – WASTE DIVERSION RATE (%)



## ANNUAL WASTE GENERATION (metric tons)

YEAR	2010	2011	2012	2013	2014	2015	2016	2017	2018
Waste to Landfill	8,247	8,083	8,227	8,366	11,836	12,580	12,443	13,883	12,571
Waste to Energy	1,548	1,543	3,697	6,820	6,876	7,504	8,721	7,986	6,852
Recycled Waste	5,883	6,443	9,259	5,618	7,073	7,836	8,632	10,358	9,223
<b>TOTAL WASTE</b>	<b>15,678</b>	<b>16,069</b>	<b>21,183</b>	<b>20,804</b>	<b>25,785</b>	<b>27,920</b>	<b>29,796</b>	<b>32,228</b>	<b>28,647</b>

NOTE: Our data quality assurance/quality control (QA/QC) efforts are ongoing. In preparing each annual report, we inevitably find errors, obtain missing data, and/or obtain better quality data as compared to the prior years' reports. For this reason, you will notice slight variations in the waste generation data reported in this year's report compared to prior reports. We consider our most current published data our most accurate and reflective of our best efforts.

## Community Engagement

We are in the business of bringing people together, whether it's at a local music club, sports arena, stadium, entertainment district or multi-day music festival. Our venues and events are part of the local community and no matter where we operate, we are committed to making our mark on the communities we serve. By actively promoting sustainability at our events and through our online assets, we are uniquely positioned to raise awareness about pressing environmental issues and to connect people around a single purpose. Here's a snapshot of the community engagement projects that took place in the last year:

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### EARTH HOUR 2018

In celebration of Earth Hour 2018, Mercedes-Benz Arena Shanghai invited JJ Lin fans to pose with Earth Hour posters and share their thoughts on protecting the planet before the singer's March 17 concert. The arena made a collective video sharing that special Earth Hour message. A week later, on March 24, arena staff hosted guests from a local school for the Earth Hour festivities which included a sustainability presentation, ice skating, and a candle-lighting ceremony prior to turning off the lights from 8:30 to 9:30 p.m. local time.



For Earth Hour 2018, AEG hosted its first-ever Earth Hour competition, where 22 of our venues competed to deliver the most innovative and impactful Earth Hour campaign. Mercedes-Benz Arena Shanghai's efforts were judged the best with Pechanga Arena in San Diego, California, Kuala Lumpur Convention Centre in Malaysia, and Gila River Arena in Glendale, Arizona rounding out the podium winners.

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### EARTH MONTH 2018

For the final three LA Kings home games in April 2018, fans were encouraged to recycle their cans and bottles at STAPLES Center Arena in Los Angeles. The team then used redemption funds to purchase water restoration certificates to offset the arena's water usage. The effort resulted in the restoration of 1,000,000 gallons of water to the Sacramento River wetlands.

During Earth Month, the LA Galaxy Foundation supported the MLS WORKS Greener Goals Week by partnering with the Garden School Foundation to finalize a month-long garden beautification and mural initiative at Leapwood Avenue Elementary in Carson, California. Volunteers transformed the existing reading garden into an edible garden with six vegetable beds featuring artwork made by the school's students.

To celebrate Earth Day 2018, employees from Sign Language XL worked alongside 400 volunteers from the community to beautify Denver's City Park.





### CALIFORNIA CLEAN AIR DAY

On October 3, 2018, AEG celebrated the first California Clean Air Day, a new campaign designed to raise awareness about the impacts of air pollution on public health. AEG's venues in California showed up big for the event with a number of unique activations including the Los Angeles Convention Center, which encouraged employees to take alternate transport on Clean Air Day. Forty-seven employees participated in the Convention Center's program, diverting 934 single-vehicle travel miles by carpooling, using public transit, biking, and walking.

### GRID ALTERNATIVES

To kick off Veterans Day, the LA Kings and AEG Energy Services partnered with GRID Alternatives to install 10 kilowatts of solar panels on four Habitat for Humanity Los Angeles homes. Over their lifetime, the panels are expected to reduce utility costs by more than \$15,000 and reduce carbon emissions by 157 tons.



### AMERICA RECYCLES DAY

For America Recycles Day, the staff at KFC Yum! Center in Louisville, Kentucky educated fans at the University of Louisville men's basketball game about recycling at the arena. During pre-game and halftime periods, the team ran graphics with facts about the arena's recycling and encouraged fans to join the movement. Earlier in the year, during Earth Month, several of the arena's staff members participated in a waterfront cleanup and local park tree planting activities.

## AEG 1EARTH Ambassadors Program

At AEG, we believe that everyone has a part to play in sustainability and that being knowledgeable about best practices can serve as a catalyst to help drive our success and inspire others to action. That is why on Earth Day 2018, to celebrate the 10-year anniversary of our AEG 1EARTH program, we launched an AEG 1EARTH Ambassadors Program. The Ambassadors Program was designed to give AEG employees who are passionate about environmental sustainability a new forum to strengthen their knowledge and learn best practices, champion sustainability with fellow employees and friends, and gain personal and professional development opportunities and experience.

Participants are required to join monthly conference calls with their colleagues from around the world. The call topics are recommended by the Ambassador group participants. Participation in the program requires each person to identify and implement a workplace sustainability initiative, volunteer for a local non-profit, and complete a sustainability-related training course.

Earth Day 2019 marks the first full year of the program. In recognition of the contributions made by the inaugural class of AEG 1EARTH Ambassadors, we decided to feature a few of them in this year's report to share their perspective and experiences:



**AEG CONGRATULATES THE INAUGURAL 2018 CLASS**  
AEG 1EARTH ENVIRONMENTAL SUSTAINABILITY AMBASSADORS PROGRAM

In celebration of 10 years of the AEG 1EARTH program, we created a new program designed to give AEG employees who are passionate about environmental sustainability a new forum to learn best practices, champion sustainability, and gain experience.

THIS YEAR'S PARTICIPANTS ARE

<b>Allegra Batista</b> AEG	<b>Jenny Hamada</b> AEG Presents	<b>Pete Lisowski</b> LA Kings
<b>Rohan Basin</b> Barclays Center	<b>Jennifer Heifetz</b> AEG Presents	<b>Jennifer Muscatello</b> Keswick Theatre
<b>Nenah Bondi</b> AEG Global Partnerships	<b>Georgina Icton</b> AEG Europe	<b>Lisa Rollins</b> LA Galaxy
<b>Katie Boone</b> ICC Sydney	<b>Jo Jablonska</b> The O2	<b>Tony Sestito</b> AEG Presents
<b>Jeff Carbaugh</b> Hawai'i Convention Center	<b>Sherry Jackson</b> Sprint Center	<b>Connie Shao</b> AEG Presents
<b>Nicky Devine</b> Bowery Presents	<b>Alice James</b> Eventim Apollo	<b>Samantha Shearer</b> Brisbane Convention & Exhibition Centre
<b>Amanda Ellis</b> LA Kings	<b>Steven Kaskalla</b> Gingerbread Shed	<b>Jaime Stephenson</b> Barclays Center
<b>Alejandro Gardiner</b> Sign Language XL	<b>Gillian Kelly</b> The O2	<b>Mari Tait</b> Hawai'i Convention Center
<b>Laura Goddard</b> ICC Sydney	<b>Lee Lacey</b> The O2	<b>Amanda Theurich-Renda</b> Starland Ballroom
<b>Ashley Hall</b> LA Galaxy	<b>Mitchell Lamont</b> ICC Sydney	<b>Stephanie Wongsam</b> AEG

For more information on AEG 1EARTH and to read AEG's latest sustainability report, please go to <https://www.aegworldwide.com/about/aeg-1earth>



### STEVEN KASKALLA

**Ticket Purchase Support Specialist • Elevate Tickets • Tempe, Arizona**

*Steven oversees customer service operations and internship programs at Elevate Tickets.*

My father worked at Bureau of Indian Affairs for many years when I was growing up and he helped address water rights disputes on the job.

That was an early impact on me, seeing how water scarcity impacts peoples' lives. When I learned about the AEG 1EARTH Ambassadors Program, I saw it as a way to apply my interest and learning about sustainability to my work life and home life. At home, I started composting and built a garden. These things took time, but they forced me to think more about what I do and eat. For example, after learning more about the food waste and food production cycles, I've switched to a vegetarian diet. I've enjoyed the program as it's helped me get my coworkers excited about sustainability and implementing greener choices around the office. It helps that we have an interested, aware group here who already understand that sustainability is important.

**SAMANTHA SHEARER**

Sustainability Coordinator • ecoBiz • Brisbane Convention & Exhibition Centre • Brisbane, Australia

*Samantha coordinates the Centre's environmental and sustainability programs, including EarthCheck, AEG 1EARTH, and ecoBiz reporting.*

I'm an enthusiastic member of our Corporate Social Responsibility (CSR) team here at the Brisbane Convention & Exhibition Centre (BCEC). We have a long history of proactively managing our environmental footprint and supporting our community. I saw joining the AEG 1EARTH Ambassadors Program as a way to help strengthen my knowledge of environmental initiatives and network with my colleagues worldwide. Since joining the program, I've completed an online course on climate change as part of the program's educational requirement. BCEC has had a long partnership with Tangalooma EcoMarines and since joining the program I've completed two local cleanups with that group. Around the office, I've worked with colleagues on topics such as the Centre's utility usage and the state-wide plastic bag ban we have here in Queensland. At home, we've instituted a new system for separating our waste and recyclables to enhance our diversion.

**JAIME STEPHENSON**

Executive Assistant • Barclays Center • Brooklyn, New York

*Jaime supports the General Manager and Assistant General Manager at Barclays Center.*

I've always been interested in sustainability and brought that interest to work at Barclays Center. A few years ago I created the Environmental Awareness Committee (EAC) at the center to see what we can do to have better practices in the workplace. For example, our employee kitchens needed a lot of help. To date, though, we've replaced disposable water cups with water bottles, replaced disposable coffee cups with coffee mugs, and switched to ceramic plates instead of disposable plates. For the center's lost and found items, we now have a ReFashionNYC bin for unclaimed clothes, we donate sunglasses and eyeglasses to a local shelter, and we donate lost cell phones. The Ambassadors Program has been a natural extension of my interests and it's been great sharing with colleagues from around the globe. I like learning what other buildings are doing, and to compare the things I'm doing at home with the other Ambassadors.

## Employee Spotlight

As a leader in our industry, our sustainability goals are ambitious, and we believe that everyone must be actively engaged in our efforts if we are to reach or surpass our goals. The success of our AEG 1EARTH program depends on our full- and part-time employees who help us each day in immeasurable ways. In this section, we profile several of our employees who are working on cutting-edge sustainability solutions to get their perspective on how to move sustainability forward in the workplace:

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### FRANCISCO COCA

Operations Director • Puerto Rico Convention Center •  
San Juan, Puerto Rico

*Francisco oversees housekeeping, set-up, engineering, and IT departments, among other operating groups, making sure that visitors and users of the Puerto Rico Convention Center and Antiguo Casino have safe, energy-efficient, and sustainable experiences.*

We have worked hard to create a culture of energy conservation. We manage energy usage with our Energy Site Team which closely monitors our energy data to identify trends, compare against benchmarks, and support long-term capital upgrades to our facilities. Through our efforts we've identified several major capital projects that will save energy and save money. We've been fortunate enough to launch several of these this year. For instance, we have been replacing legacy fluorescent tube lights with LEDs throughout our office spaces, saving over 220,000 kilowatt hours each year. Looking ahead, we will continue to convert to LEDs in our meeting rooms and exhibit halls in 2019. In addition, we recently replaced and upgraded our outside air handling units and we expect this project will save an additional 1,400,000 kilowatt hours each year. As you know, Puerto Rico is part of the Windward Islands in the Caribbean so we will always be in the path of hurricanes. As a result of Irma and Maria in 2017, we sustained damage to 80% of our rooftop solar system. So our consistent upgrades to our facility not only helps us operate more efficiently but also helps build resiliency that will help us weather future storms.



### JESSICA FRANCO

Sustainability Programs Manager • STAPLES Center • Los  
Angeles, California

*Jessica ensures that STAPLES Center maintains its ISO 14001-certified environmental management system (EMS) and manages all sustainability-related projects taking place at the STAPLES Center in Los Angeles.*

We have 250 full-time employees at the STAPLES Center and, during events, another 750 to 800 staff on hand. Keeping our EMS relevant and using to support day-to-day operations is important to us, so we have to continually work with our employees to make sure everyone understands the system and their responsibilities. We also keep very close track on our environmental performance by looking at our Ecometrics. We want to see continual

improvement, so I spend a lot of time training, doing presentations, auditing, and walking the building to keep sustainability front-of-mind here in the building. Energy efficiency and sustainability are definitely part of our culture and have been as long as I've been here for over 12 years. I manage our green team and EcoChallenge reward program so I see how people respond. I think they like the recognition and that fact that we're trying to what's right for the environment.



### ADAM PEARSON

Head of Commercial • The O<sub>2</sub> • London, England

*As Head of Commercial, Adam is responsible for boosting revenue, The O<sub>2</sub> App, and food and beverage experiences. He also heads up the Green Team steering group at The O<sub>2</sub>.*

In 2018 we started exploring a deposit model for reusable pint cups but, with a venue as complex at The O<sub>2</sub>, quickly began to encounter implementation challenges. However, in the course of hosting U2's "Experience + Innocence" tour dates in October 2018, things changed.

U2 virtually mandated the use of reusable pint cups to reduce single-use plastic waste. We were able to make things work for the U2 shows and within four months we now have operated reusable cups on a pilot scheme at eight events and 26 shows, removing an estimated 95,000 single-use plastic cups from our waste stream. What we've learned is that it takes a concerted effort across our staff, our guests, artists, promoters, event organizers, vendors and suppliers to make these initiatives successful over the long term.



### MARI TAIT

Director of Operations • Hawai'i Convention Center • Honolulu, Hawai'i

*Mari oversees on-going operations at the convention center, managing Engineering, Information Technology, Telecom, Housekeeping, Landscaping, Capital Improvement Projects, and Sustainability.*

2018 was a big year for the Hawai'i Convention Center. To mark our 20<sup>th</sup> year anniversary, we launched our Ho'omalūō Program, a comprehensive approach to environmental sustainability with the goal of enhancing the guest, planner, staff and community meetings and events experience. Ho'omalūō, which means "to conserve; to use or manage wisely" in the Hawaiian language, celebrates our recent award of LEED v.4 O+M: Existing Buildings Gold Certification by the U.S. Green Building Council. The road to LEED certification led us to examine all phases of our operations, perform tests, conduct surveys, and gather data. It was a big endeavor but well worth it given all that we learned. The process helped us focus and cover important aspects of our operations. We have ongoing communication with our employees about the Ho'omalūō Program and how they can do their part in contributing to sustainability. We have also started working with contractors and clients and looking into ways to help them plan and execute greener events. Later this year, we are trying to target zero waste for one of our upcoming events and I think if we can achieve that it will be our next landmark accomplishment.





MERCEDES PLATZ

ICON OUTLET OPENS AT THE O<sub>2</sub>

MYFIGUEROA

THE LAST STRAW? WE CAN ONLY HOPE

LOS ANGELES CONVENTION CENTER  
GOES SOLAR

LED LIGHTING ILLUMINATES ENERGY  
SAVINGS

WASTE MANAGEMENT: ONE STEP AT A TIME

HYDRATION: HOW TO PROVIDE WATER  
IN A CONVENIENT, ENVIRONMENTALLY  
FRIENDLY WAY

HAWAI'I CONVENTION CENTER EARNS  
LEED GOLD; INTRODUCES HO'OMALUŌ

ELECTRIC FOREST

2018 MEMBERSHIPS, CERTIFICATIONS,  
AND RECOGNITIONS

## Mercedes Platz



After a construction period of over two years, AEG opened its newest entertainment district in Berlin, Germany, the Mercedes Platz, with a weekend-long celebration that kicked off on Friday, October 12, 2018. A crowd of more than 25,000 gathered to watch AEG's President and CEO, Dan Beckerman, the economic senator for Berlin, Romona Pop, and Britta Seeger, a member of the Board of Directors for Daimler AG, present the Platz to the public, all accompanied by fireworks, light shows, and water shows.

The new Mercedes Platz covers 20,500 square meters and fulfills the long-term vision for this site that began with the construction of AEG's Mercedes-Benz Arena, which opened in 2008. Today, the arena welcomes 1.3 million visitors annually and the new Platz is expected to expand that number by 4.5 million people each year. The complex includes the Verti Music Hall, Berlin's newest music venue with

capacity of 4,350 people, a 2,500 seat UCI movie theatre, a 28-lane bowling alley, 20 restaurants and bars, two hotels, and 10,000 square meters of office space.

The Platz marks the latest example of AEG's commitment to developing sustainable infrastructure projects through its entertainment district model, which was pioneered in Los Angeles with L.A. LIVE. These developments are focused on reclaiming urban environments to create resilient and inclusive city spaces. Prior to the construction of the Mercedes-Benz Arena, the site where the Berlin campus is located was a neglected former industrial site that needed significant restoration and rehabilitation. Despite these challenges, the site had something in common with AEG's other entertainment districts: a strategic location centrally located with good transportation infrastructure. Mercedes Platz is within the urban core of Berlin, sandwiched between a rail corridor and the

Spree River, adjacent to the Berlin Wall Museum and East Side Gallery. The site is a short walk from the Warschauer Strasse S-Bahn, U-Bahn, and street tram station that sees 85,000 passengers each day, easily accessible via public transit. For cyclists, there are 500 bicycle stands station at various points around the property. Although some visitors, workers, and guests will drive to the site, only 400 additional parking stalls were added, and traffic will be optimized using an interactive wayfinding system.



management system is used to monitor energy consumption and to support energy optimization schemes. Overall, the project is roughly 20% more efficient than statutory requirements.

Mercedes Platz was also designed to run efficiently with low environmental impact. For starters, the office buildings use thermal concrete core activation and only need a minimum of additional cooling and heating. When heating and cooling are required, energy usage is kept to a minimum by leveraging large-scale services. For heating, the Platz is connected to an existing district heating network reducing the energy consumption and carbon emissions compared to stand-alone systems. A central cooling plant provides cooling for all of the buildings, taking advantage of the different load profiles to serve all spaces more efficiently. LED lights were used wherever possible and a central building

Although the Platz is in an urban location, efforts were taken to restore greenery where possible. More than 20% of the roof areas across the Platz are green roofs. Through construction, 32 new trees were planted across the site. There's also a rainwater retention system that helps minimize the impact of the new development on the local sewer system. One of our favorite features is that the water used for the site's iconic fountains is collected, treated, and recirculated, helping entertain guests and locals without putting unnecessary additional demand on local potable water supplies.



## Icon Outlet Opens at The O<sub>2</sub>



credit: Luke Dyson

As we profiled in last year's report, The O<sub>2</sub> celebrated its 10th anniversary in 2017. Just a year later, on October 18, 2018, The O<sub>2</sub> celebrated the completion of ICON Outlet, a new 210,000-square foot premium urban shopping outlet. For the first time, visitors to The O<sub>2</sub> are able to walk all the way around the full circle of the iconic venue and visitors can experience the fusion of fashion alongside world-class entertainment, bars, restaurants, and other attractions.

Sustainability principles were embedded in the new retail outlet through the design and construction stages. As of the writing of this report, the project is targeting and on track to receive the prestigious BREEAM (Building Research Establishment's Environmental Assessment Method) Outstanding rating, the highest rating that a development can obtain within the BREEAM scheme and is broadly achieved by less than 1% of the UK's new non-domestic buildings.

ICON Outlet includes low-flush toilets and low-flow taps that provide over 55% reduction in water use compared to the BREEAM baseline; it's estimated that these fixtures will save over 8.5 million litres of water per year, roughly equivalent to the usage of 52 British households' usage.

To minimize energy usage and carbon emissions, the project is connected to an offsite district heating network, reducing carbon emissions 28% compared to the regulatory baseline. For cooling, the climate control system makes liberal use of cool outside air when conditions allow, decreasing the energy demand of the chiller systems.

In addition to these operational features, a new ecologically valuable habitat was added within the wider site boundary to add aesthetic and ecological values on a previously heavily used industrial site.

As the ICON Outlet was being completed, the operations team at The O<sub>2</sub> were upgrading the waste and materials handling infrastructure on site to enhance recycling and diversion from landfill. The team completed construction of a purpose-built materials handling area with an Eco-Digester for food waste and double compaction for

improving environmental performance. In its first year, the team piloted a reusable cup program, organized talks with sustainability experts from venue partner Sky, and volunteered for local projects like beach clean ups and “plogging” trips. In the arena, in-house caterers Levy Restaurants introduced green initiatives on the

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The project is connected to an offsite district heating network, reducing carbon emissions 28% compared to the regulatory baseline.

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general waste (currently the only one of its kind in the world). Together, these additions are expected to reduce truck trips by up to 300 trips per year, reducing fuel use and eliminating air pollution and carbon emissions.

Finally, 2018 saw the inception of an internal green team at The O<sub>2</sub>, a group of representatives from different departments brought together to focus efforts on

concourses. These include the complete removal of plastic straws, cutlery, and sauce sachets; use of chef whites made from recycled plastic bottles; and replacement of greaseproof paper. These initiatives, combined with removal of single-use plastics and introduction of reusable cups for certain events, contributed to a savings of 1.6 tonnes of plastic at most recent count.



credit: Luke Dyson

## My Figueroa



On August 30, 2018, Los Angeles celebrated the completion of the Figueroa Corridor Streetscape project, also known as MyFigueroa. In a decade, MyFigueroa (MyFig) transformed downtown LA's Figueroa Corridor into a complete, multimodal street that serves pedestrians, bicyclists, transit riders, and drivers. AEG's L.A. LIVE entertainment district and STAPLES Center arena, and the AEG-managed Los Angeles Convention Center all front Figueroa Street and benefit from the project.

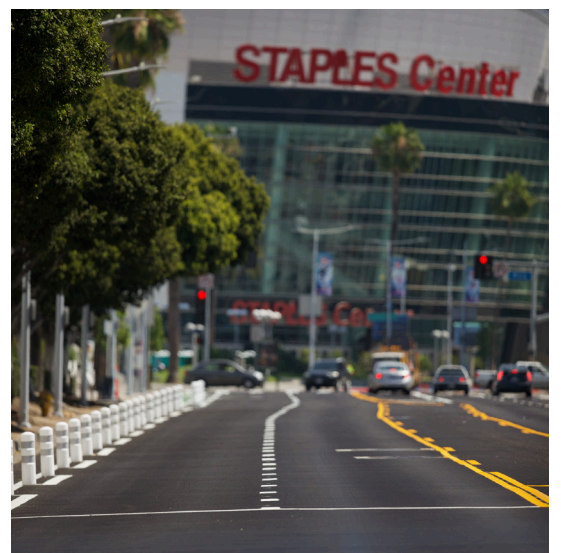
MyFig connects downtown LA to Expo Park, extending between 7th Street and Martin Luther King Boulevard and added the following amenities:

- Better signals, signage, and crosswalks
- A three-mile bikeway linking Downtown and South Los Angeles
- Protected bike lanes
- More street trees and public art

Launched in 2010, MyFig was funded by a \$20 million Proposition 1C grant;

Proposition 1C funding is designed to improve infrastructure in urban areas. With its global headquarters based in downtown Los Angeles, AEG, was a major Figueroa Corridor stakeholder and supporter of the project, bringing a holistic vision for a denser and vibrant Figueroa Street and facilitating the grant-writing process. AEG's shared vision was to transform this car-centric thoroughfare to a multi-modal corridor serving new housing, event centers, and other activity hubs along the corridor.

When asked to look back at the project, AEG's Executive Vice President of Real Estate Development, Ted Tanner, said "[w]hen we initiated the first study of the Figueroa Corridor in 2005, we saw the critical need to better connect downtown LA, the convention center, STAPLES Center and L.A. Live with Expo Park, its museums, and the University of Southern California campus. Our priority was to enhance pedestrian, bicycle and transit use and safety along this corridor. It is heartwarming to see these improvements realized."



## The Last Straw? We Can Only Hope



2018 was the year plastic straws captured public consciousness in a way we wouldn't have expected given the relatively small volume of waste plastic straws represent. But the focus on plastic straws has spurred action not only on the issue of straws, but also on the larger issue of single-use plastics.

During the past year, we've been working with our venues to audit their existing straw usage and work with them to revise their policies (if necessary) to find more environmentally friendly straw options that still meet the needs of disabled guests. These efforts are a work in progress and we expect to see continued improvement, as customer preferences and habits evolve, new regulations and laws are passed, and the market provides new and different serviceware alternatives.



We've summarized what's been done at some of the venues around our global network and, where we have estimates, the impact these decisions have had on the amount of single-use plastic generated:

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We think that the focus on plastic straws has been very effective in spurring action not only on the issue of plastic straws, but also on the larger issue of single-use plastics.

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Eliminating Single-Use Plastic Straws by Converting to Paper Straws	
Venue(s)	Number of Plastic Straws Eliminated Per Year (est.)
Barclays Center and NYCB LIVE	5,500,000
STAPLES Center and Microsoft Theater	500,000
O <sub>2</sub> Arena	280,000
Los Angeles Convention Center	250,000
Brisbane Entertainment Centre	250,000
Kuala Lumpur Convention Centre	120,000
<b>TOTAL</b>	<b>6,900,000</b>

Although these numbers are estimates, they do show the incredible scale of the single-use plastic problem, as millions of fans attend events at our venues each year. Given that it's difficult to be 100% sure that all plastic straws will be recycled or landfilled, it's easy to see how these items make their way into our ocean environments, and why it's necessary to take action to manage straw use and disposition.

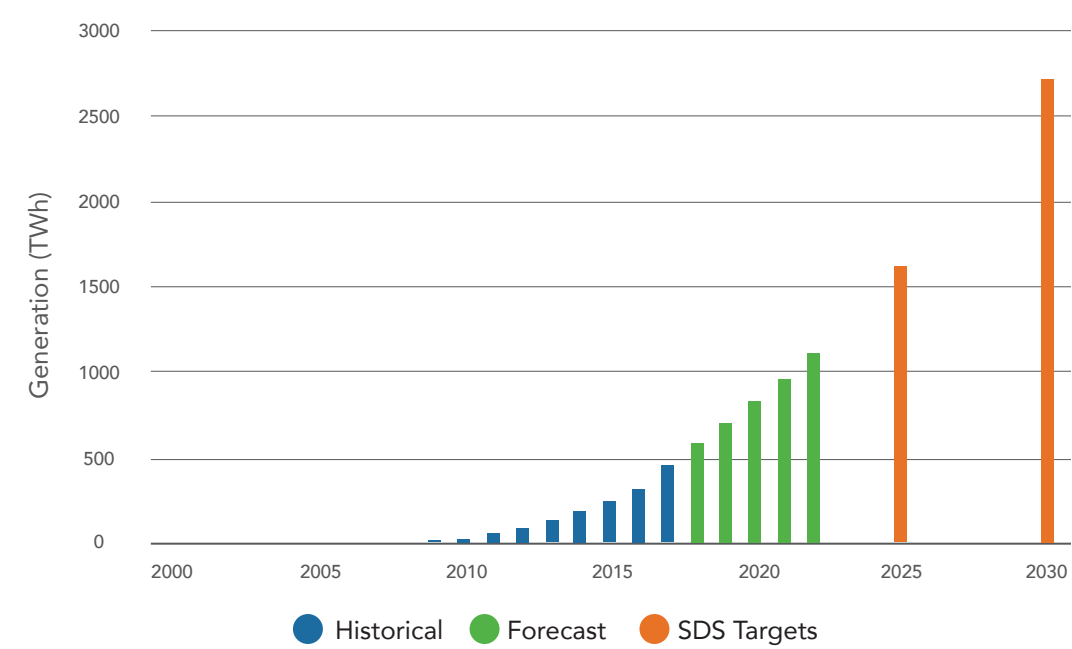
Other venues also converting from plastic to paper straws, changing to a "Straws Upon Request" policy, or eliminating straws altogether:



# Los Angeles Convention Center Goes Solar



According to the International Energy Agency (IEA), solar photovoltaic (PV) technology has grown tremendously over the past decade, with worldwide PV generation going from 32 terawatt-hours in 2010 to an estimated 710 terawatt-hours in 2019, a 22x increase in just a decade!



Consistent with this trend, we have seen several AEG venues install on-site solar PV generation. Convention centers are particularly common applications for on-site solar: First, they have sustained electrical loads during daytime hours due to their event schedules, and, second, they usually have large, relatively flat roofs that can accommodate large numbers of solar panels.

In April 2018, the Los Angeles Convention Center (LACC) became the latest AEG-managed convention center to install on-site solar when it powered up its 2.21 megawatt solar array on April 4 during a press conference with Los Angeles Mayor Eric Garcetti. The new installation gave LACC the largest solar array on a municipally-owned convention center in the United States. The panels generate enough electricity to cover about 17% of the LACC's annual electric power usage. The project is expected to reduce LACC's carbon footprint by 2,554 metric tons per year.

Other AEG-owned convention centers with on-site solar include ICC Sydney, which was built with a 520 kilowatt solar array which was Australia's first central business district community-funded solar energy project, as well as the Puerto Rico Convention Center, whose 5 megawatt solar PV installation is the largest of its kind in Puerto Rico, powering both the center and the local grid.

We are looking forward to the continued growth of solar PV and other renewable energy technologies. We source solar and other renewables in a variety of ways, such as through local utilities, through commodity supply contracts, by purchasing renewable energy credits (RECs), and, of course, through on-site generating facilities. Here's a list of AEG owned or operated facilities with on-site solar:

STAPLES Center

Microsoft Theater

Up at The O<sub>2</sub>

RAC Arena

Tele2 Arena

Puerto Rico Convention Center

Eldorado Polo Club,  
site of Coachella Valley Music and Arts  
Festival and Stagecoach Festival

ICC Sydney

Los Angeles Convention Center

*In 2018, solar generating facilities at AEG venues generated 8,595 megawatt hours of electricity, or enough to power 798 US homes for a year; this amount is equivalent to 2.5% of AEG's 2018 worldwide electric power use. In 2018, we produced 11 times more solar energy than we did in 2010.*



## LED Lighting Illuminates Energy Savings

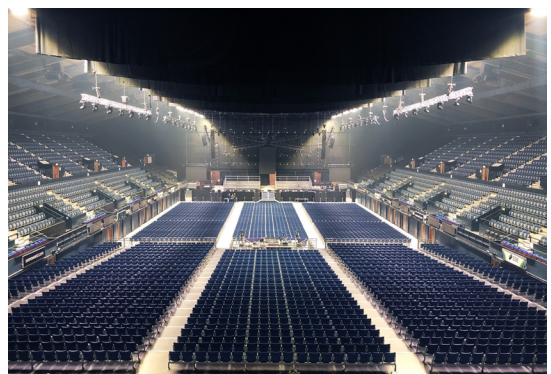
LED lighting technology has been out for years now and its advantages over older technologies are well known: less energy consumption, better control, better light quality, among others. As AEG's venues and operations continue to make the switch to LED, here's a look back at some of the more noteworthy LED conversions we undertook in 2018.

For starters, the Gila River Arena in Glendale, Arizona, home of the Arizona Coyotes of the National Hockey League (NHL), replaced its original metal halide sports lights with new LED models, decreasing total wattage by 60%. The arena became the latest NHL arena to switch to LED sports lights. "This is something we've been waiting for," said Sean Langer, Director of Operations, "the light is so much better and we know there are significant savings on utilities."



Across the country NYCB Live, home of the Nassau Veterans Memorial Coliseum, upgraded its arena lighting system to LED in time for the NHL's NY Islanders' return to play within the coliseum. The new system consists of 196 new lights which reduced overall wattage by over 85%. "Not only is this new system cost effective," said Joseph Zino, General Manager, "but it is also extremely energy efficient and provides an enhanced experience for our guests."

Across the pond, the SSE Arena, Wembley, also added new LED arena lights. By installing the upgraded lights, the arena can meet the light levels of their old system with only 5% of the power used—a 95% reduction in energy use! Plus, the new system allows the arena to adjust light levels to accommodate different needs—they can now deliver five times the light quantity than was possible with the old system. "The new system is a great energy saver for the venue," said Peter Fewings, Technical Director, "we are forecasting significant savings, through reduced energy usage and lower maintenance requirements."

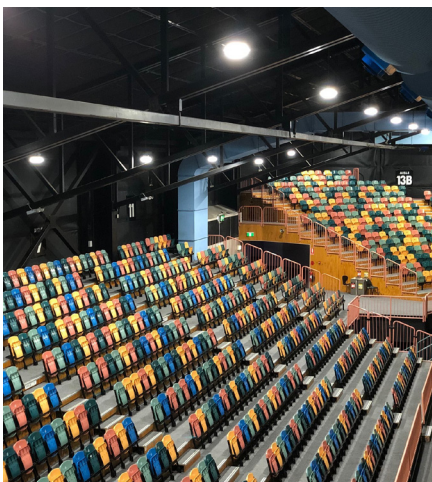


While the arena sports lights get a lot of attention because they are integral to the presentation of live sports, there are a lot of lighting systems throughout our venues and these are also continuously upgraded for efficiency and performance. The following are some examples of other lighting upgrades in 2018:

Barclays Center in Brooklyn, New York, completed a significant lighting upgrade, converting to LED on the main concourses, event level spaces, MZ level, and catwalk lights. Over 7,000 lights in the building were converted to LED, reducing wattage by up to 90% and increasing light levels and clarity throughout the building. The completed project is estimated to reduce lighting-related energy use by 66%.



Brisbane Entertainment Centre in Brisbane, Australia replaced approximately 60% of its external path, roadway, and car park lighting. As a result, visibility has increased which has had the carry-on effect of improving safety. Energy consumption has also been reduced. Inside the arena, the main arena corridor, sports centre foyer, and other corridors were converted to LED, brightening the environment and reducing energy use. The new lamps also are expected to last over 25,000 hours, eliminating the costs and environmental impacts associated with periodic relamping.



Newcastle Entertainment Centre in Newcastle, Australia, retrofit over 1,100 legacy lamps to LED technology, reducing lighting load by 115 kilowatts while increasing lighting levels from 15% to 27%. The improved light quality in the arena was evident right away, with noticeable improvements for attendees in the arena and for viewers on television. Further, all of the old equipment was recycled and even the cardboard boxes used to deliver the new product were recycled.

The O<sub>2</sub> in London, England, replaced a variety of lights in the O<sub>2</sub> Arena with LEDs, including the Level 4 concourse, staff corridor, and lounge areas. In addition to changing to more energy-efficient lamps, the arena added non-event lighting modes and movement sensors to further reduce lighting-related energy consumption.

## Waste Management: One Step at a Time

Waste and materials management continues to be a significant challenge in our industry. While “Reduce, Reuse, Recycle” is easy to remember, the mantra can be difficult to implement.

2018 was noteworthy for the noticeable increase in public awareness about the importance of reducing waste in the first place, as evidenced by Collins Dictionary naming the term “single-use” as the word of the year. At AEG we spent a lot of time thinking and working on ways to address the use of single-use products in our operations, as these products ultimately form the bulk of the materials that we have to manage. The O<sub>2</sub> in London is a perfect example. In 2018, they completed the following initiatives, replacing:

- Plastic milk containers with glass bottles
- Plastic water bottles with refillable glass bottles in meeting rooms
- Sugar sachets with bulk sugar at coffee and tea stations

Although these initiatives, like removing plastic straws, may seem somewhat minor in the grand scheme of things, we believe they are critically important because they help chip away at the “throw away” culture our modern society has created.

Reuse is also critical for keeping materials out of the landfill. Many products destined to be thrown away still have plenty of life, they just need to be connected to the next user. Across the globe we saw a number of successful reuse initiatives, such as the following:

Following the rebranding of the venue, RAC Arena in Perth, Australia was able to repurpose 94% of their old staff uniforms to support local charities. Uniforms were converted into duvet covers, curtains, and teddy bears that were donated to local crisis centers and public housing. Unneeded chefs’ jackets were donated to local schools for use in food donation and career training opportunities. Finally, 239 winter jackets, 237 t-shirts, and 21 hats were donated to Homeless Connect Australia and Street Friends WA to help homeless communities in the Perth area.



At the Barclays Center, in Brooklyn, New York they worked with DSNY’s Clothing Reuse Program, adding a bin onsite to collect clothing donations. Their first pickup yielded approximately 315 pounds of reusable clothing. During their annual coat drive, they collected over 70 coats that were donated to a local family shelter. Finally, through the arena concessionaire’s ongoing Levy Family Meal program, just under 22 tons of food was diverted from the waste stream and reserved in the area.

At the Puerto Rico Convention Center, staff found a way to use shipping pallets that otherwise would have been disposed: They took them apart and used the leftover wood to refurbish twelve mobile sales carts. In doing so, they kept the pallet material out of the disposal stream. They also were able to avoid purchasing new carts, which saved money and reduced the upstream environmental impacts of the convention center.



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Microsoft Theater donated 60 sheets of plywood (over 5 tons) from stage maintenance to their local Habitat for Humanity branch.

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At the Sprint Center in Kansas City, Missouri our local AEG 1EARTH Ambassador started a repurposing initiative that encourages staff to collect spare items at home and at the office to be donated to ScrapsKC, a local reuse organization.

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For many people, the term “recycling” probably brings to mind blue bins where people deposit plastic bottles and aluminum cans. In 2018, STAPLES Center made that process easier for fans by working with corporate sponsor Coca-Cola to install 130 new Coke-branded recycling points throughout the arena, helping guests easily identify where they can deposit recyclable drink containers.

Recycling isn’t just for bottles and cans, though. The O<sub>2</sub> and Barclays Center began recycling coffee pods at their venues; at The O<sub>2</sub>, they recycle about 1,800 pods per month. Further, the Barclays Center was able to recycle 99% of its old employee uniforms working through its hauler and a local fabric recycler. Sign Language XL, one of the country’s leading digital printers, headquartered in Denver, Colorado works with a local partner to recycle styrene, acrylic, and coroplast left over from completed jobs.



Food and other organic wastes can also be recycled, of course, and over the past year The O<sub>2</sub> added collection points for food waste that is then delivered to the wormery on site. Gila River Arena in Glendale, Arizona worked with its local hauler to implement a food waste collection system that now diverts pre-consumer food waste from the landfill. And Brisbane Entertainment Centre in Australia implemented a back-of-house composting program for the green room and dressing rooms.

## Hydration: How to Provide Water in a Convenient, Environmentally Friendly Way

It is estimated that globally humans buy 1,000,000 plastic water bottles each minute. Unfortunately, the large majority of those bottles are not recycled and this results in environmental damage and waste of resources. Although improving recycling processes and infrastructure are part of the solution to these problems, source reduction is also important. By encouraging people to use reusable water bottles and providing safe and accessible water refill stations, we can do our part to reduce demand for single-use plastics.

In 2018, the Los Angeles Convention Center in downtown Los Angeles installed 20 water refill stations throughout their site. On rolling out the project, they distributed 250 refillable water bottles to their employees. With the new refilling stations, they are reducing the equivalent of about 20,000 16-ounce single-use plastic water bottles each month, for a total of 240,000 water bottles eliminated each year. While that's only about 15 seconds' worth of global plastic water bottle sales, it's a good start!



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The Theater at Grand Prairie in Texas now has four backstage water refill stations to support visiting productions and catering. Plastic water bottles are only provided upon request. As part of the initiative, each full time employee was given a reusable water bottle.

Sign Language XL in Denver, Colorado changed from a plastic-bottle based office hydration system to one that is connected to the building's existing freshwater plumbing. The new system provides filtered drinking water for employees and guests. They estimate the new solutions eliminates the use of up to 840 pounds of plastic each year. "Everyone here loves the new hydration system," said Dara Sturges, Office Coordinator, "no more need to lug around those 5-gallon water jugs, and the filtered water is colder, too!"



Fiddler's Green Amphitheatre in Greenwood Village, Colorado installed two new water refill stations before 2018's concert season. The stations work as water fountains and as bottle refill stations and provide patrons a place to refill their water containers.

## Hawai'i Convention Center Earns LEED Gold; Introduces Ho'omalūō

In 2018 the Hawai'i Convention Center (HCC) celebrated 20 years of operation, capping off a long history of environmentally conscientious operations by achieving LEED Gold certification and launching a new branded sustainability program.

The U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) certification for existing buildings covers the full scope of elements of building operations. The HCC was the first and only member of the "public assembly, convention center" category to earn LEED v.4 EBOM Gold Certification in the United States, and is the only LEED v.4 EBOM Gold project in Hawai'i.

"The LEED certification is a national recognition of the dedicated work of our staff to weave sustainability into our operations," said Teri Orton, HCC general manager. "I'm proud of what we were able to accomplish."

2018 also saw HCC launch the Ho'omalūō Program, a comprehensive approach to environmental sustainability with the goal of enhancing the guest, planner, staff and community meetings and events experience. Ho'omalūō, which means "to conserve; to use or manage wisely" in the Hawaiian language, includes the local

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*I'm proud of what we were able to accomplish.*

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team's work to conserve and reuse resources; maintain a high quality of operations, such as climate, guest comfort and building design; and careful attention to reducing waste throughout each stage in the event process.

In 2018 the operations team revised back-of-house sorting procedures to enhance material capture. HCC was able to increase diversion by 30% from 2017 to 2018. HCC also provides all employees with a discounted payment plan to enroll in Biki, a Honolulu bike-share program. A solar-powered Biki station is conveniently located in front of the building.



## Electric Forest

The Electric Forest Festival has been held each summer at Rothbury, Michigan's Double JJ Ranch since 2011. Each year has brought new developments for the festival's music, art, videos, experience, and, of course, sustainable programs.

2018's event showed how the festival's culture of reuse, conservation, and consideration for others was put into practice. First, the festival's annual Roy Price Memorial Food Drive, a partnership between Electric Forest and Conscious Alliance, helped collect over 35,700 meals that were distributed to local communities, a festival record that more than doubled 2017's total.

2018 also marked the second year that the festival partnered with the Crystal Valley Care Fund to collect gently used gear left over in campgrounds to support local communities. Donations included:

- 4,000 square yards of AstroTurf donated to local Rothbury and Grant Township neighbors
- 80 low-back beach chairs donated to local farms and recreation areas
- 3,000 foam blocks donated to the local gymnastics community
- 10,000 meals, surplus prepared and perishable food from catering and food vendors, donated to feed local teens in need via non-profit partner West Michigan Teen Challenge
- Used cooking oil from food vendors and staff catering was captured by a local farmer who converted the oil to biodiesel
- 550 items from camping were donated to local families recovering from catastrophic events



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Improved vendor communication and use of compostable serviceware helped improve organics and food scrap recover by almost 25% from the prior year.

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A more fan-facing initiative, the Electricology Plug In Program provided resources for attendees to integrate sustainability into their festival experience. The program's "Recycle, Earn, and Redeem" structure creates an easy and fun way for festivalgoers to join together to help reduce the festival's footprint. For example, once headlining sets conclude, the Prize Cart is rolled into the show area with musical accompaniment encouraging fans to "pick up and rage." By involving participants, the show areas are left much cleaner, leading to better waste diversion and helping staff cleanup crews work more efficiently. For their time, participants can claim prizes from the Prize Cart.

Finally, in the back-of-house areas, improved vendor communication and use of compostable serviceware helped improve organics and food scrap recover by almost 25% from the prior year. Also, sharp eyes from staff identified an opportunity to collect and divert coroplast signage, otherwise bound for landfill, to a local processing partner.



## 2018 Memberships, Certifications, and Recognitions

### MEMBERSHIPS

Green Sports Alliance  
U.S. Green Building Council  
US Composting Council

### CERTIFICATIONS

STAPLES Center and Kuala Lumpur Convention Centre renewed ISO 14001 environmental management system certifications.

Brisbane Convention & Exhibition Centre is EarthCheck Certified Gold; Kuala Lumpur Convention Centre is EarthCheck Certified Silver; and Cairns Convention Centre and Darwin Convention Centre are Benchmarked Bronze.

### RECOGNITIONS

**Hawai'i Convention Center** was awarded LEED v4 O+M: Existing Buildings Gold Certification by the U.S. Green Building Council and was awarded the State of Hawaii's Hawaii Green Business Award Program's Green Business Award at the Po'okela level, the highest level in the program.

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**The Los Angeles Convention Center (LACC)** was given the 2018 Green Leadership Award in the Business category for its Next Level Sustainability project at the 10th annual Los Angeles County Green Leadership Awards. Next Level Sustainability also led to the LACC's earning the 2018 Communitas Award for Excellence in Corporate Social Responsibility.

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**The Brisbane Convention & Exhibition Centre** won the Litter Prevention Award in the Business category in the Brisbane City Council's 2018 Cleaner Suburbs Award competition.

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**John Marler**, VP of Energy and Environment for AEG was named Person of the Year by Energy Manager Today magazine.

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# Mercedes-Benz Arena



