

Bloomberg

The Evolution of Sustainable Operations at Bloomberg

Using internal and external collaboration to find innovative solutions to reduce the environmental impact of our operations

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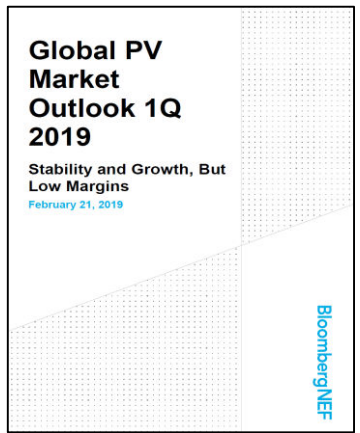


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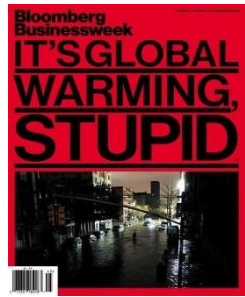


BloombergNEF

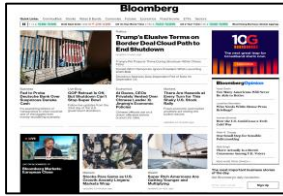
Bloomberg Government

Bloomberg Environment

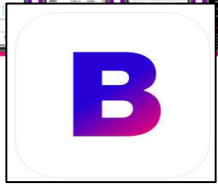
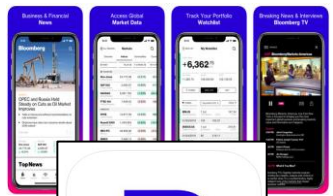
Media Group



Magazines



TV/Radio



Apps


Bloomberg

Sustainability is integrated into Bloomberg products – e.g., BloombergNEF research on corporate renewables procurement

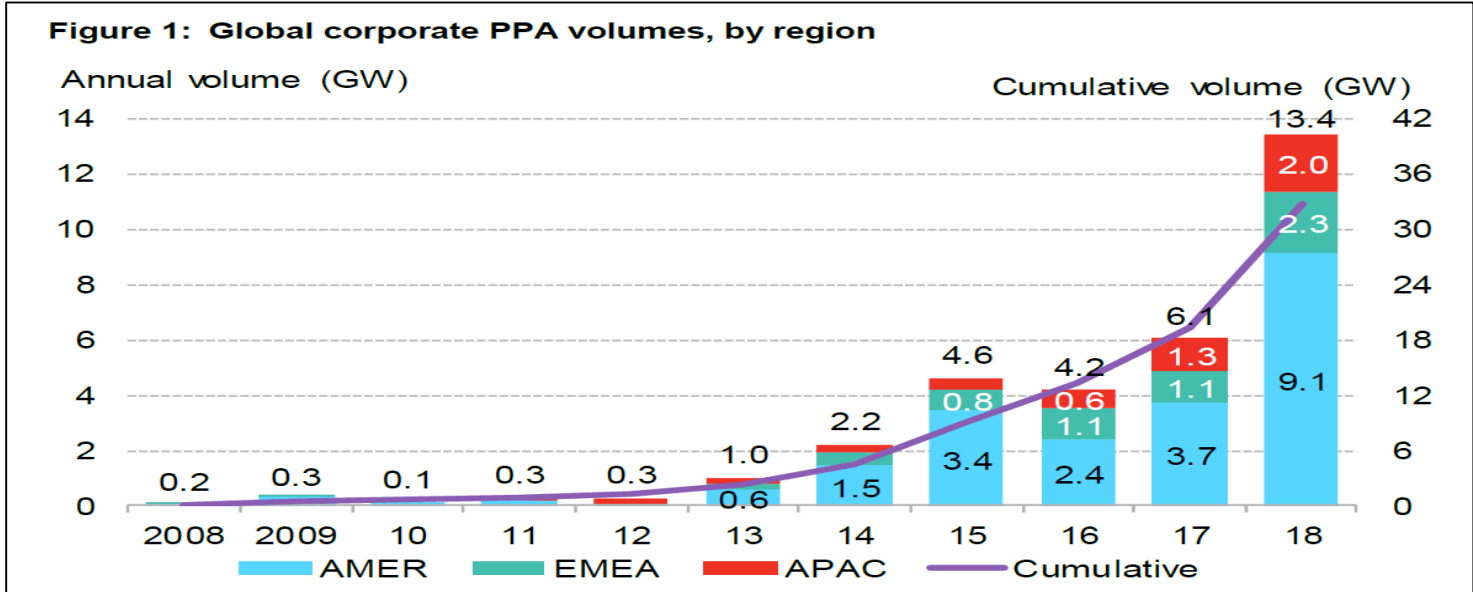
BloombergNEF has the most sophisticated new energy datasets and models in the world, with analysts and experts in six continents, publishing over 1,000 reports as well as commentary, reactions, and long-term forecasts every year. The new energy economy is now.

1H 2019 Corporate Energy Market Outlook

Double up
January 28, 2019



BloombergNEF



13.4GW

Volume of corporate PPAs signed in 2018

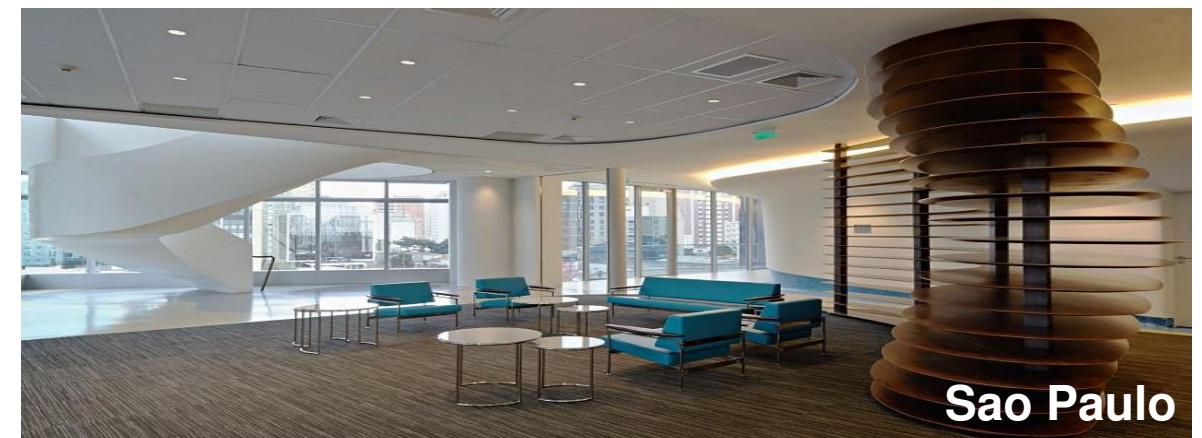
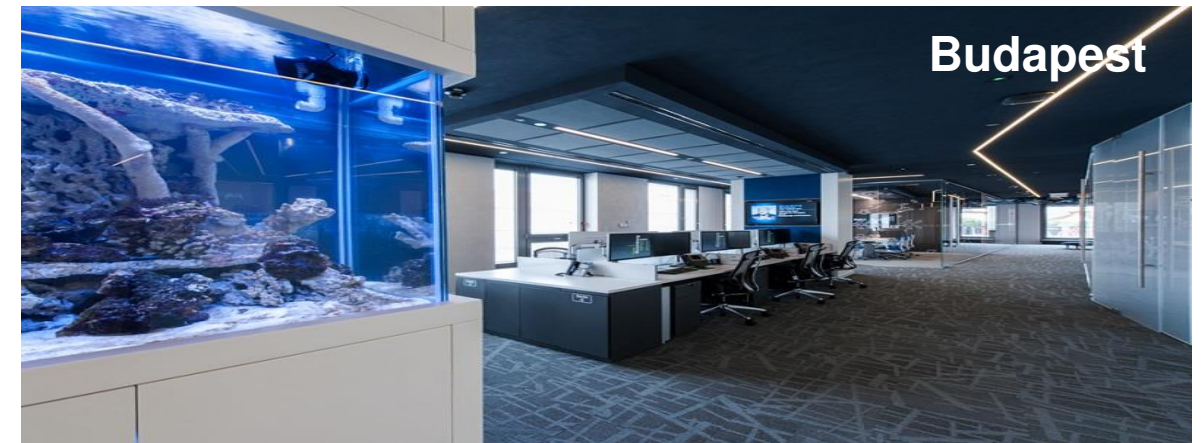
190TWh

Projected 2030 clean energy shortfall for the current RE100 signatories

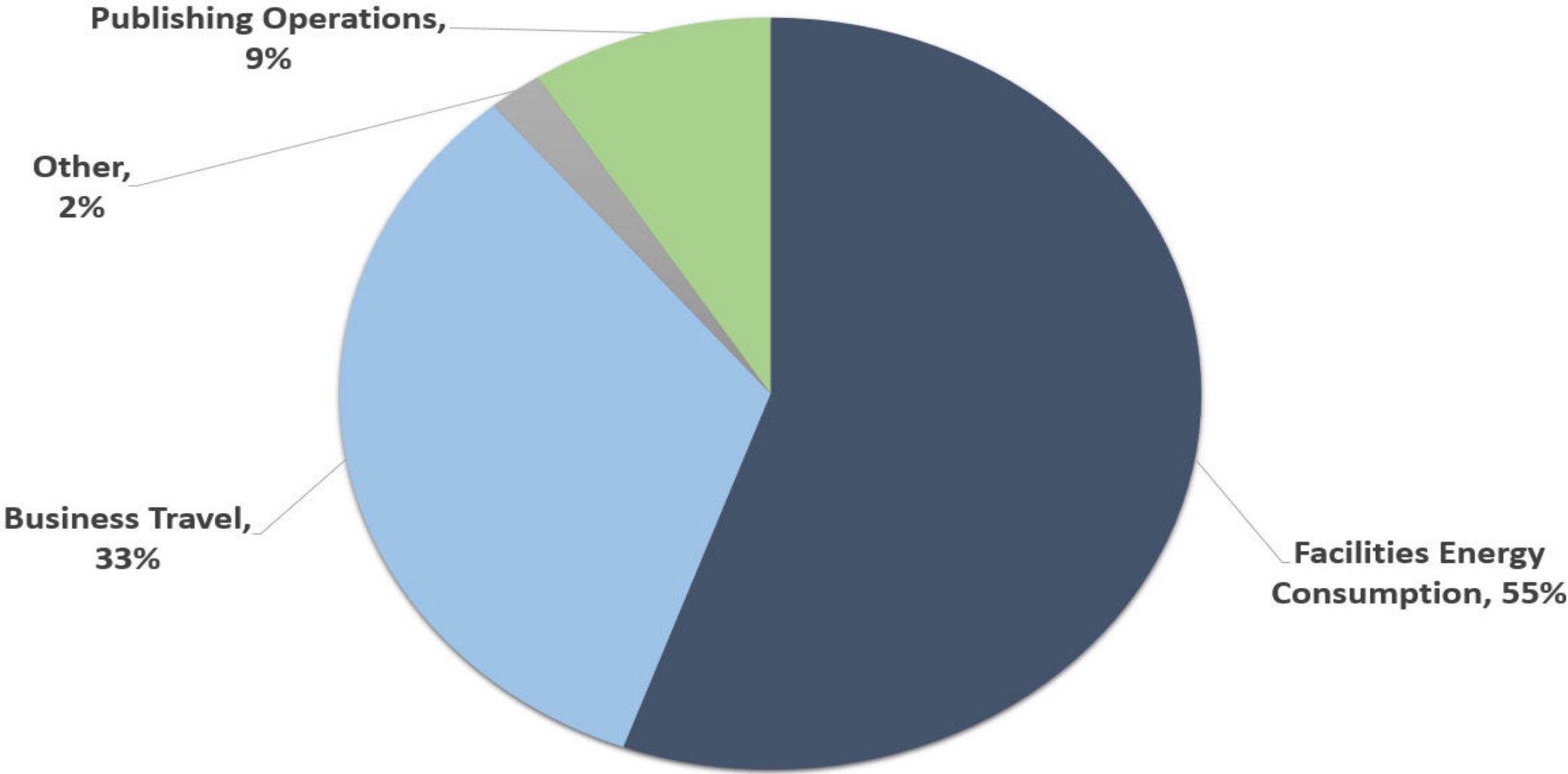
BNEF estimates it will require an additional **\$105 billion of investment to meet this clean energy shortfall**, creating a significant opportunity for developers, utilities and financial players that offer intermediary advisory and credit services.

Bloomberg has operations throughout the world

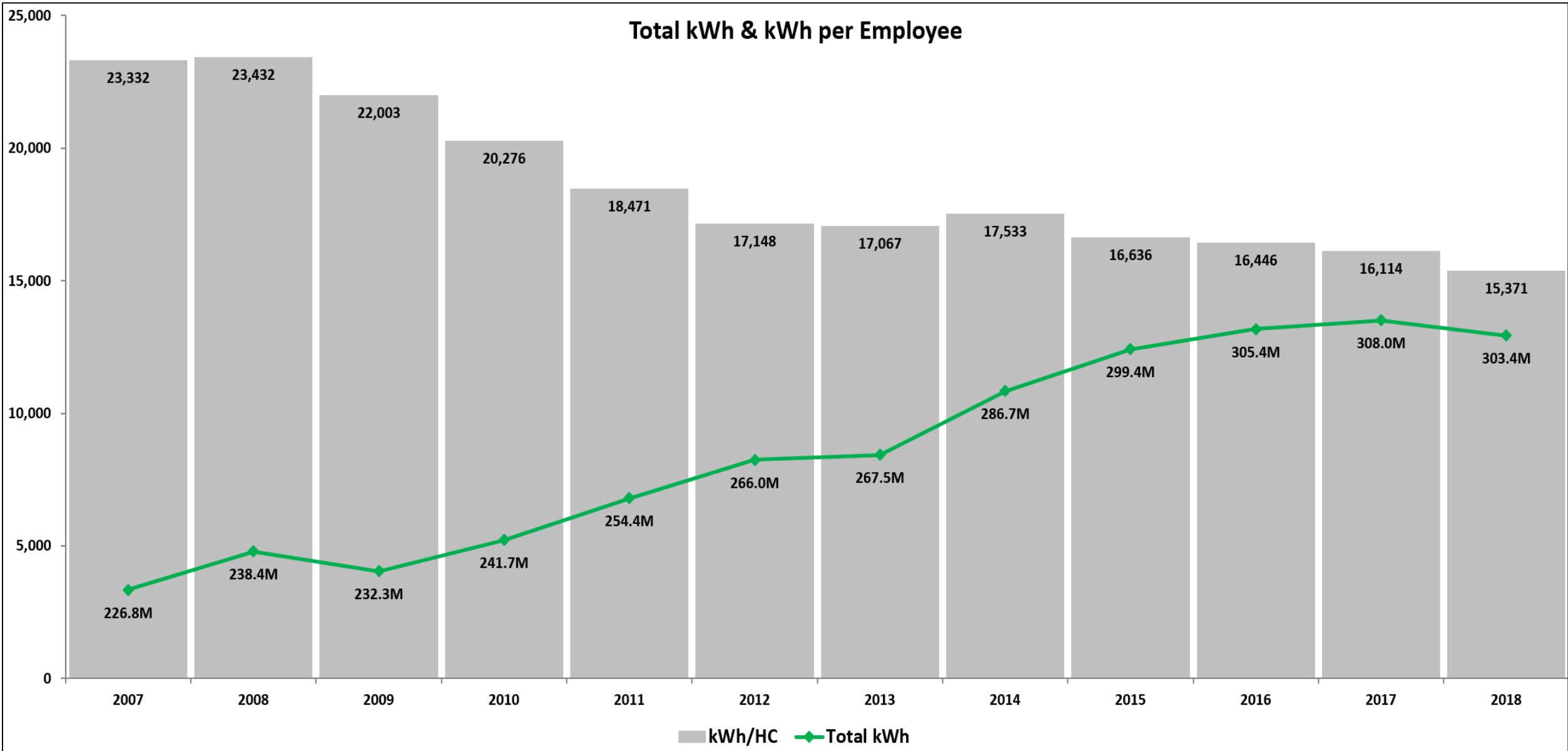
- Privately held company, headquartered in New York City
- Over 19,000 employees based in 177 locations
- 4.9-million owned and leased square feet of office space in 72 countries



Energy use from offices and data centers is the largest source of Bloomberg's carbon emissions



Bloomberg was 34% more energy efficient in 2018 vs. 2007 baseline



Reduction achieved by focusing on demand reduction & infrastructure investments – \$116M OpEx savings to date

In Phase 1 we focused on demand reduction and infrastructure investment. This enabled Bloomberg reduce emissions and opex while embedding sustainable practices into our operations.

	Direct Reduction			Indirect Reduction	
	Demand Reduction/ Operating Expense	Infrastructure Investment	Renewable Energy Infrastructure	Renewable Energy Certificates	
Key Projects Through 2018	Lights Out	PC Upgrades	Solar (2) – Princeton, NJ	1.44 Billion kWh REC Purchases	Operating Polices <ul style="list-style-type: none"> - Green Office Leasing - Environmentally Preferred Purchasing - Sustainable Electronics Manufacturing - 3rd Party Printer Guidelines - LEED Gold or above offices - Waste Management - Green Construction - Green Cleaning - Integrated Pest Mgmt - Warehouse Guidelines - Energy Star - Vehicle Leasing
	Flat Panel Sleep	Data Center Free Cooling	Solar – San Francisco		
	Office Print Reduction	Lighting Sensors/ Controls/Upgrades	Solar – Queens, NY	Green e-Certified RECs	
	Car Service Usage Reduction	HVAC Improvements	Wind 1 – Hidalgo, TX		
	Magazine Print Run Reductions	PC Sleep	Wind 2 – Arkwright, NY		
CO2e Impact	921,273 MT	56,671 MT	25,318 MT	531,864 MT	Total Direct Reduct.: 1,003,262 MT Total Indirect Reduct.: 531,864 MT
\$\$\$ Impact	\$97.1 million	\$19.1 million	\$3.0 million	(\$2.9 million)	Total Net Savings: \$116M

Bloomberg has attained 39 LEED/BREEAM certifications – over 3 million square feet of certified offices on six continents

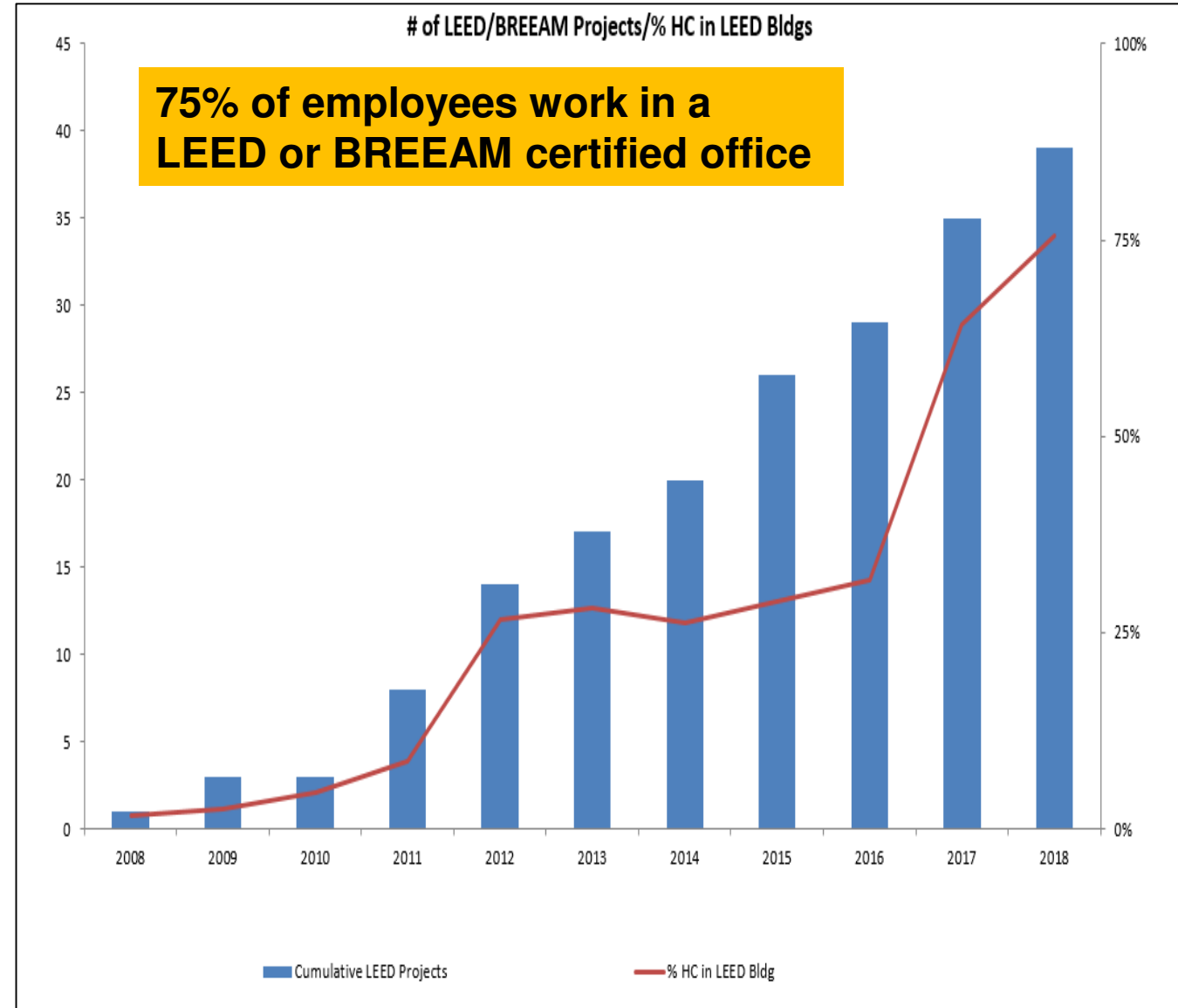
3rd party certifications provide transparency

They prove to our customers, employees and other stakeholders that our commitment to sustainability is core to our operations.

We design, build and operate our offices in a sustainable manner that reduces energy and water usage, encourages alternate forms of transportation and prioritizes the health and wellbeing of our employees and visitors.

Our LEED projects have.....

- **Diverted 86% of construction waste** from landfill – more than 25,000,000 pounds
- **Reduced water usage by 37%** – to date an estimated saving of nearly 27,000,000 gallons of water
- **25% reduction in lighting power density** – to date an estimated savings of 7 million kWh of electricity



Evidence of success: Reduced absolute electricity by 15% and saved \$21M to date at 731 Lexington Ave, NYC

Between 2007 and 2018 at 731 Lexington...

Headcount increased by 50% to over 6,000 employees

Our office space increased by 28%, adding 9 additional floors, for a total of nearly 900,000 square feet

Despite this growth, overall electricity has decreased by 15%

On a growth adjusted basis....

Electricity usage per square foot decreased 31%

Electricity usage per person decreased 43%



- Installed time clocks to put the lights on a reasonable schedule (6 am to 8 pm weekdays on most floors)
- PC sleep software
- Retrofit all of the lighting to lower powered bulbs
- Variable frequency drives on computer room air conditioners
- Fan powered boxes on schedules
- Base building mgmt. raised our chilled water set point
- Removed open air refrigeration for canned and bottled beverages and added fountain drinks in our pantries
- On the upper floors (21-29) all lights on occupancy sensors and day lighting on the perimeters

Bloomberg, in partnership with Vornado (our landlord), achieved LEED Gold O&M & 3 star Fitwel at 731 Lexington Ave

This project gave us the opportunity to validate our rigorous sustainable operating policies and that our design philosophy promotes activity that contributes to the health and well-being of our employees and visitors.

Bloomberg partnered with Vornado Realty Trust, the building's manager, to achieve LEED O+M.

This standard addresses efficient and optimum use of energy and water resources, purchase of environmentally preferred products and food, waste stream management and ongoing indoor environmental quality.

- High walkability score
- Access to mass transportation
- Indoor bike parking
- Employee participation in CSA program
- Accessible stairways that connect all occupied floors
- Promote use of stairways
- Make stairways visible to occupants
- Green purchasing policy
- Provide natural daylight to majority of workspaces
- Provide views to the outside for majority of workspaces
- Break areas for lunch time activity
- Quiet rooms
- Lactation rooms
- Provide healthy food selections
- Automated external defibrillators on each floor



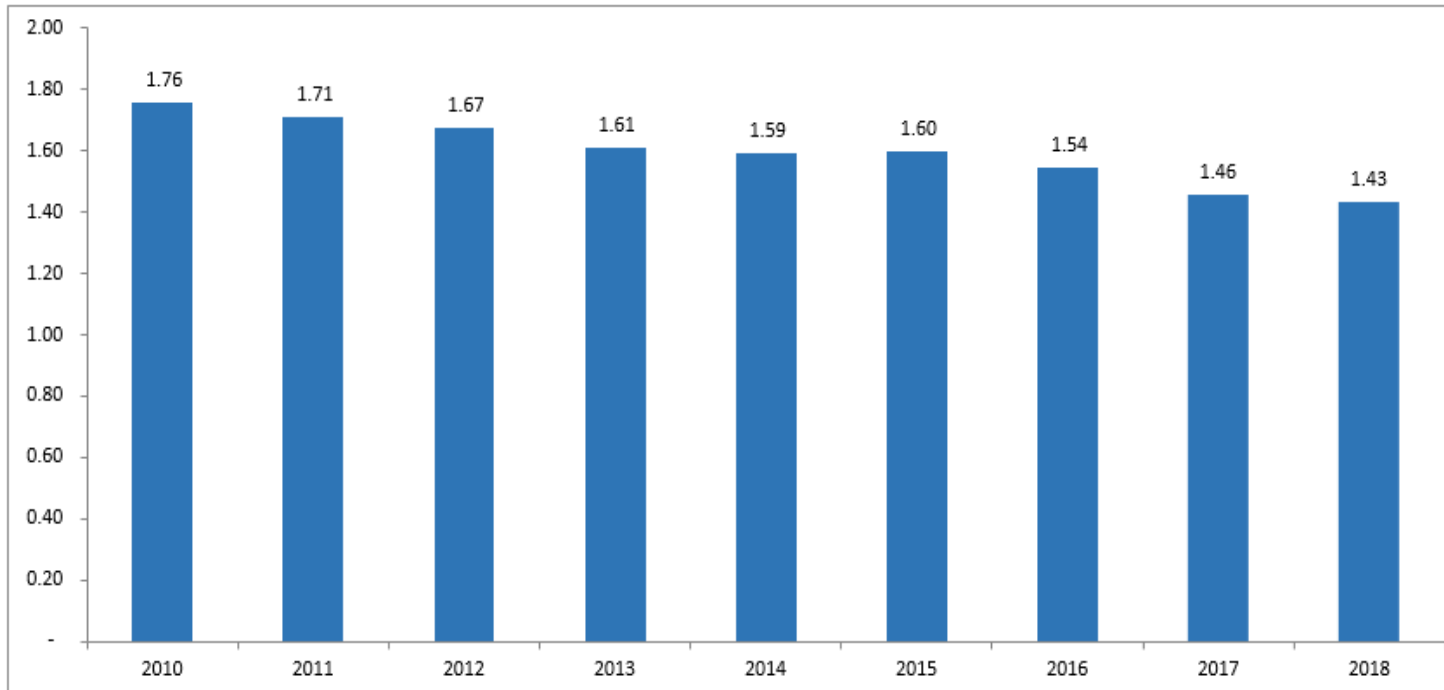
In 2018, improved data center efficiency saved 33 million kWh, resulting in \$2.7M OpEx savings, vs. 2010 data center baseline

Power usage effectiveness (PUE) is the ratio of total amount of power used by a data center to the power delivered to computing equipment.

Bloomberg began systematically monitoring PUE in 2010.

To measure the efficiency of our data we take the current information technology load and apply it to past PUE to determine the total energy we would have used if we did not change operations.

Data Center Power Usage Effectiveness by Year



Culture change led to implementing....

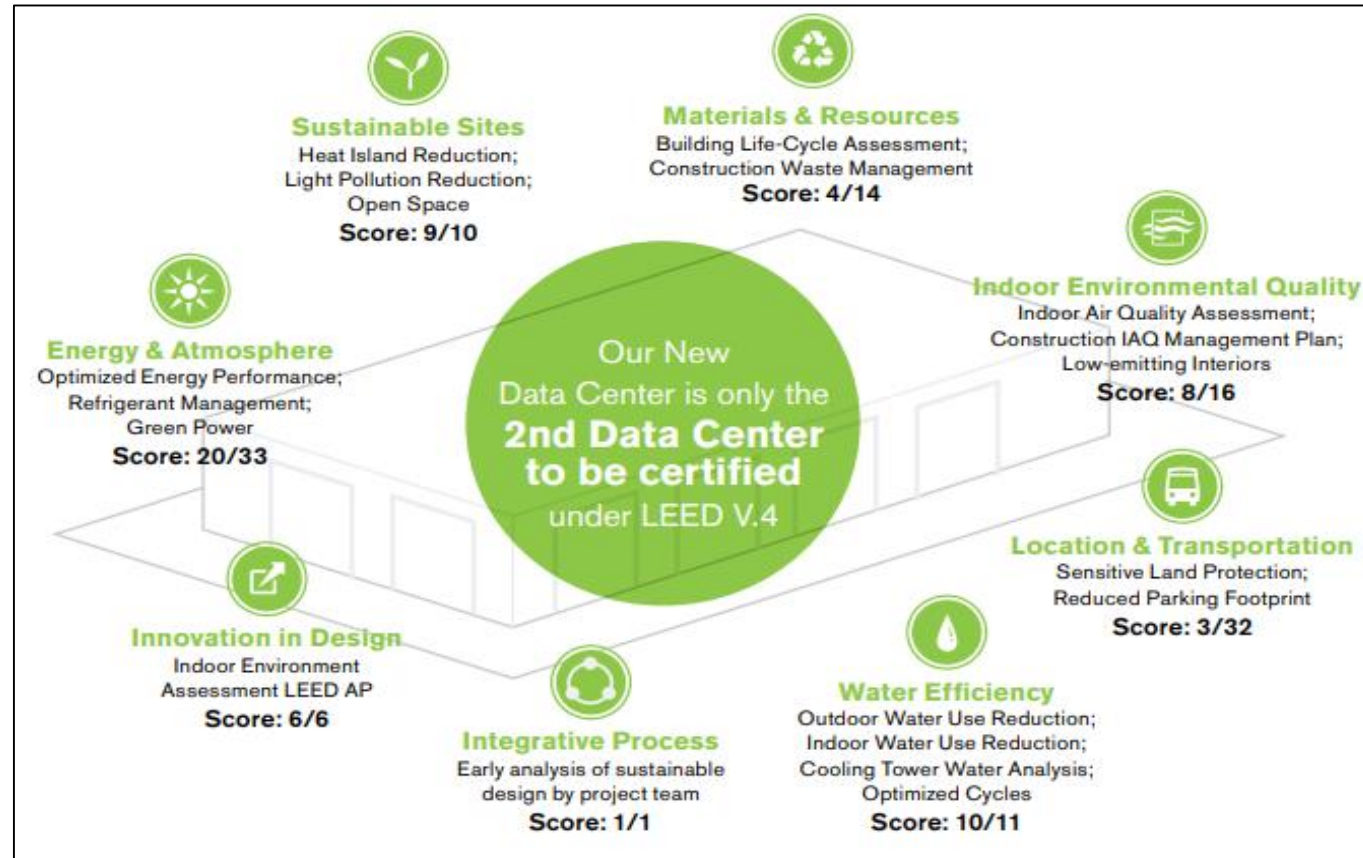
- Sensors to monitor thermal conditions
- Raising temperature setpoints
- Hot and cold aisle air containment
- Computer room air conditioners (CRACs) in alleys outside of white floor
- Free cooling
- Chiller Plant Optimization + Orchestration
- Efficient IT equipment

New data center was the 2nd to achieve LEED V.4 New Construction for Data Centers

Bloomberg participated in the beta program to help the USGBC develop and refine the new standard

This rating system is specifically designed and equipped to meet the need of high-density computing equipment such as server racks, used for data storage and processing.

Whereas a typical building is designed to meet heating and cooling needs for occupant comfort, a data center must provide massive cooling power for its servers. LEED BD&C: Data Centers addresses the unique needs of these energy-intensive buildings to improve efficiency.



In late 2017, Bloomberg opened its new European Headquarters in London

Our London building sets new standards for sustainability and innovation, and raises the bar for future office buildings around the world.

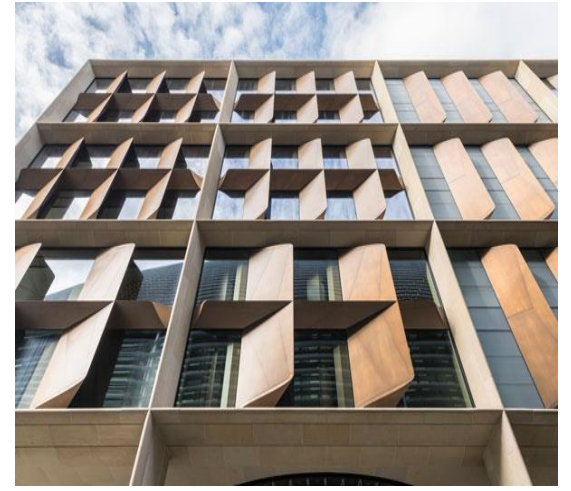
Bloomberg London Office

Integrated Petal-design Ceiling



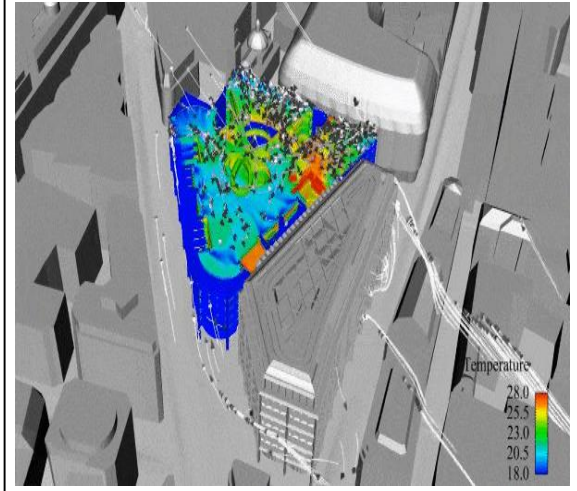
Our innovative ceiling panels feature 2.5 million polished aluminum “petals” that save energy by improving the efficiency of heating, cooling and lighting functions. Incorporating 500k LED lights, the ceiling uses 40% less energy than a typical fluorescent office lighting system. Its unique petal design also helps manage acoustics and airflow.

Natural Ventilation



When the outside air temperature is suitable, we can turn off our mechanical ventilation system, open the custom bronze blades shading the building’s interiors and cool the building with naturally flowing air. This significantly reduces energy consumption.

Smart Airflow



When the building is in natural ventilation mode, air is drawn up through the building’s six-story ramp and out through vents in the roof. Sensors also allow us to adjust indoor airflow in response to how many people are in the building, which will save 600-750 MWh of power per year.

Water Conservation

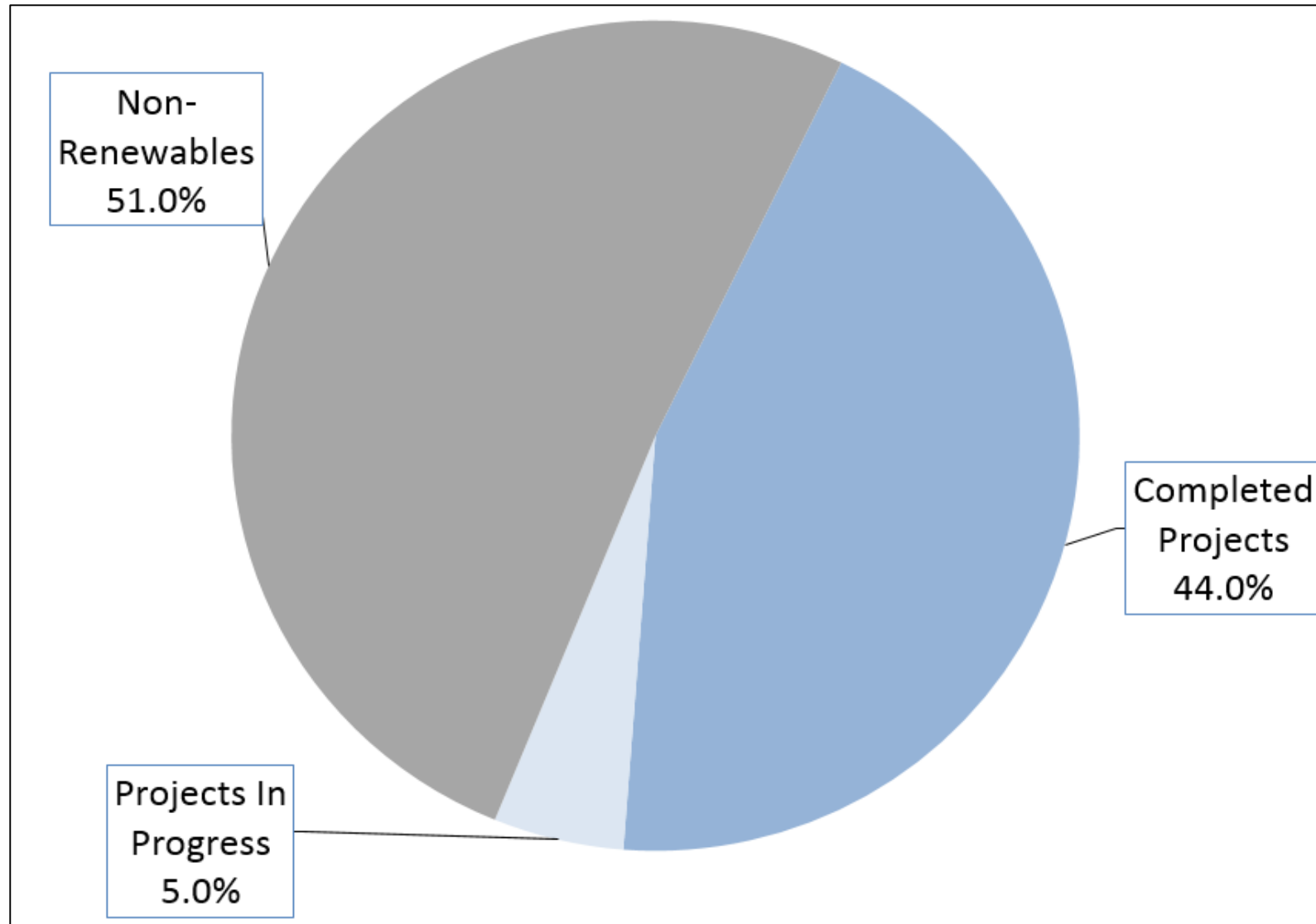


The building is 70% more water-efficient than a typical office building. An on-site water treatment plant allows us to collect and reuse rainwater from the roof, as well as “grey water” from sinks, saving 25 million liters of water a year. Recycled water feeds our airline-style vacuum-flush toilets, which use net zero municipal water.

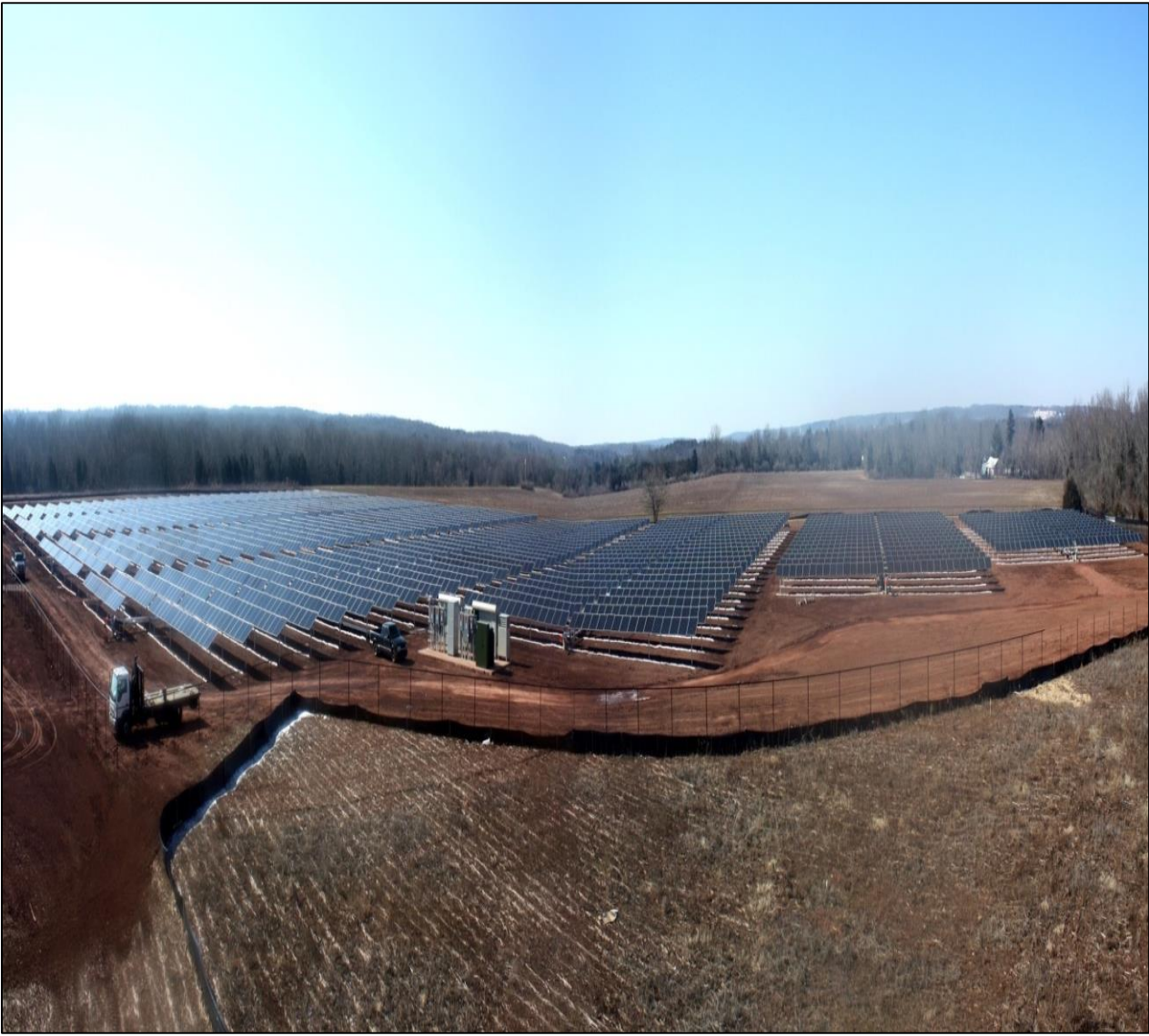
In January 2016, Bloomberg made an RE100 commitment to source 100% of our electricity from renewable sources by 2025



By end of 2020 Bloomberg expects to procure 49% of electricity from renewable sources



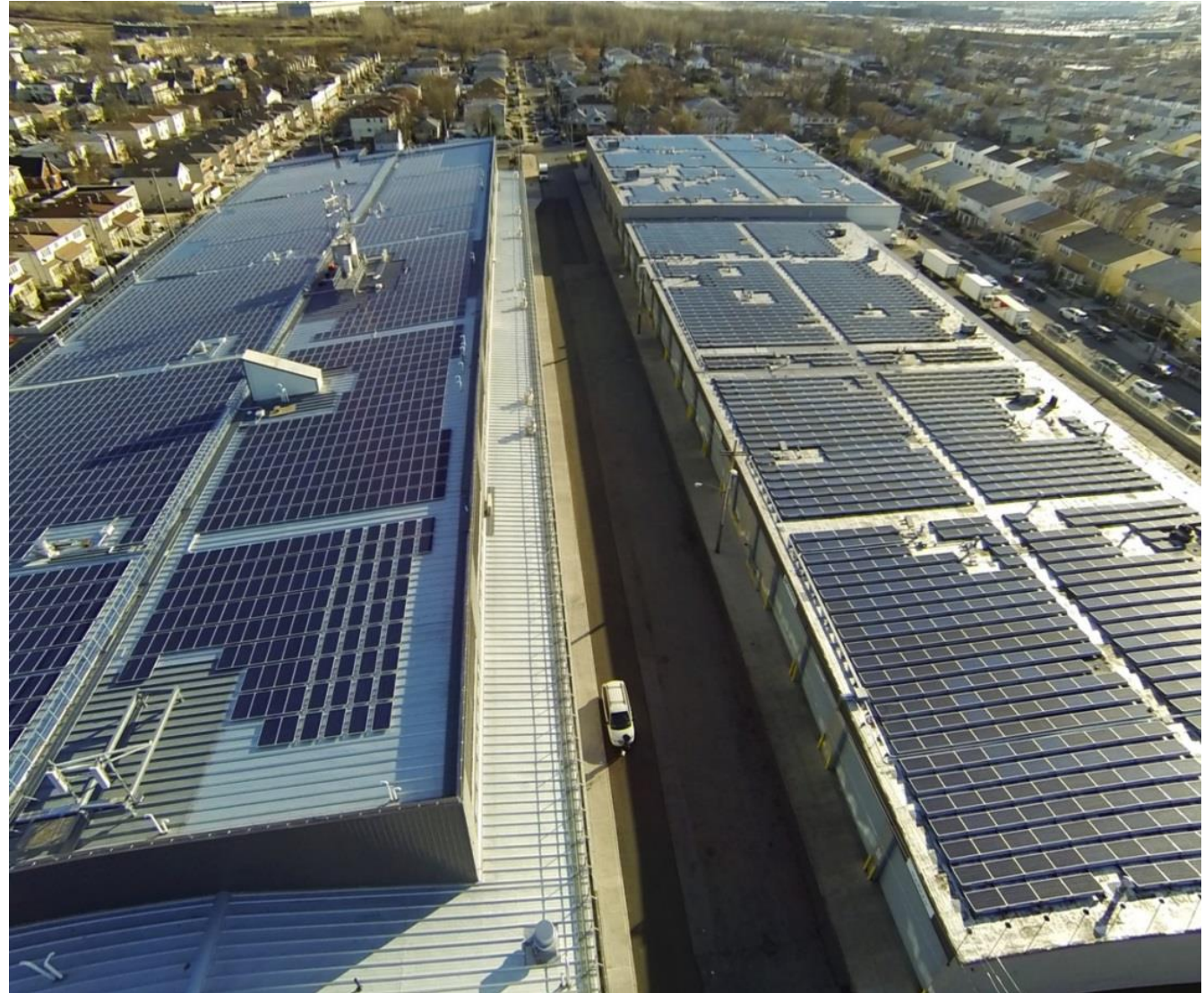
Bloomberg has completed three onsite solar projects in New Jersey and California



Our first off-site solar project was a 1.5 MW remote net meter PPA in Queens, NY

- September 2015 completion
- ~1.7 million kWh produced annually
- ~4,900 MT CO₂e saved/avoided over 10 year term

- **First** usage of the innovative solar remote net metering policy to power a midtown New York City skyscraper
- **Largest** remote net metered project in New York City
- **Largest** solar project in Queens, NY



In 2018, Bloomberg signed an aggregated PPA with four other companies

First aggregated deal that does not involve one large anchor tenant. This model serves as an example of how companies with smaller electric loads can band together to acquire renewables.

Corporate Renewable Energy Aggregation Group

Bloomberg

COX
ENTERPRISES

Gap Inc.



workday

Level10
Energy

BayWa r.e.

"This transaction is a great example of a group sharing best practices, working together and showing the benefit that cross-firm collaboration can have. It also serves as an example to developers that a market exists for these projects."

– Michael Barry, Head of Sustainable Business Operations at Bloomberg

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Bloomberg, Cox Enterprises, Gap Inc., Salesforce and Workday Close All-New Renewable Energy Aggregation Deal

🐦 in f ✉

January 17, 2019

Five global brands sign agreements for a joint 42.5 megawatt renewable energy deal, creating a new blueprint for renewable energy aggregation

New York, 17 January, 2019 - [Bloomberg](#), [Cox Enterprises](#), [Gap Inc.](#) (NYSE: GPS), [Salesforce](#) (NASDAQ: CRM), and [Workday](#) (NASDAQ: WDAY), with guidance from LevelTen Energy and its renewable energy procurement platform, closed 42.5 megawatts of a 100 megawatt North Carolina solar project, by global renewable energy developer, service provider and wholesaler, BayWa r.e. This group of companies, coming together as the *Corporate Renewable Energy Aggregation Group*, is the first example of companies aggregating similar, relatively small amounts of renewable energy demand to collaboratively enter into a virtual power purchase agreement (VPPA), collectively acting as the anchor tenant for a large offsite renewable energy project. The unprecedented coordination between five international businesses lays the groundwork for other corporates to procure renewable energy cooperatively, maximizing value and reducing risk.

To learn more about Bloomberg and our efforts please see our Impact Report

We're committed to mainstreaming sustainable finance and business, reducing our carbon emissions and engaging our employees and communities. Partnerships amplify our impact!

Bloomberg Impact Report

Sustainability is embedded in our products, operations and people.
Here's how we measured up in 2017.

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