Booz | Allen | Hamilton

FISCAL YEAR 2017 CARBON FOOTPRINT

A YEAR OF SUSTAINABLE GROWTH AND COMMITMENT

Recognizing that our people are our greatest asset, we educate and encourage our employees to play an active role in reducing our carbon footprint and making environmentally responsible choices.

OUR COMMITMENT TO SUSTAINABILITY

At Booz Allen Hamilton, we're committed to sustainable growth. We formalized this commitment in 2010 with our corporate sustainability statement, and since then we've continually refined our approach to make our firm and our people more effective stewards of the environment. Our firmwide sustainability program is powered by an ISO 14001-complaint environmental management system and managed by a dedicated Sustainability Program Management Office (PMO). And, recognizing that our people are our greatest asset, we educate and encourage our employees to play an active role in making environmentally responsible choices and reducing our carbon footprint.

WHAT'S NEW IN FY2017

In 2017, we refined some of our data collection and calculation approaches to enable a more robust understanding of the firm's emission sources and strengthen our reduction strategies. We expanded our facilities carbon footprint calculations to include international offices and doubled participation in our firmwide employee commuting survey. We also continued our award-winning Way We Work strategy to increase "centers of gravity" office spaces closest to our key clients and initiated our NexGen strategy to better utilize our current and new facilities.

OUR GOALS AT A GLANCE

As a consulting firm, our core business revolves around our people. Consequently, we've focused our carbon footprint strategy on reducing emissions from the space our employees occupy, the energy they use, and their work-related travel. Exhibit 1 shows Booz Allen's key carbon-related sustainability goals and targets for FY2017.

Exhibit 1. FY2017 Sustainability Goals and Targets

✓ Reduce Scope 2 emissions intensity per employee FTE (15% by 2026)
✓ Reduce Scope 2 emissions intensity per square foot (15% by 2026)
✓ Increase green office space
✓ Reduce employee electricity use
✓ Increase equipment efficiency
✓ Reduce consumption and waste
✓ Use green office and kitchen supplies
✓ Reduce employee travel
✓ Promote sustainable transportation
✓ Increase employee use of green hotels

Source: Booz Allen Hamilton Sustainability PMO

FY2017 REPORT OVERVIEW

This carbon footprint report focuses on activities in FY2017 (April 1, 2016 through March 31, 2017). It includes energy consumption data related to our facilities, employee travel, and employee commuting. The report also details our methodology for calculating emissions, including any assumptions and data gaps. All relevant emissions are Scopes 2 and 3, and emissions estimates are expressed in metric tons (MT) of carbon dioxide equivalents (CO2-e).

Exhibit 2 shows Booz Allen's FY2017 carbon footprint was 50,382.69 MT of CO2-e emissions. The data shows that emissions related to our facilities decreased by 8.89 percent (1,633.97 MT of CO2-e) in FY2017 when compared with the previous reporting year (FY2016). This change reflects a decrease in firm's overall leased square footage, as well as a decrease in emissions per square foot of leased space.

Reported business travel emissions decreased by 0.45 percent (124.51 MT of CO2-e). Employee commuting emissions increased by 48.19 percent (2,047.99 MT of CO2-e) when compared to the FY2016 baseline, reflecting refinements to survey questions to include more methods of commuting, in addition to demographic fluctuations caused by a doubling of the number of survey participants.

In total, Booz Allen's carbon footprint increased by 0.58 percent (289.52 MT of CO2-e) when compared with FY2016. As we further refine our data collection and improve our calculation methodology, we anticipate that short-term fluctuations in the firm's reported emissions will give way to long-term overall reductions in the firm's carbon footprint.

Exhibit 2. FY2017 Booz Allen Carbon Footprint

	EMISSIONS (MT OF CO2-E)				
CATEGORY	CY12	CY13	CY14	FY16	FY17
SCOPE 2					
Facilities	20,641.36	22,374.93	21,088.69	18,382.82	**16,748.85**
SCOPE 3					
Business Travel	29,107.90	23,480.60	27,099.99	27,460.32	**27,335.81**
Employee Commuting	N/A	N/A	N/A	4,250.04	**6,298.03**
TOTAL	**49,749.26**	**45,855.53**	**48,188.68**	**50,093.17**	**50,382.69**
% Change from Prior Year		-7.83%	5.09%	3.95%	**0.58%**

Source: Booz Allen Hamilton Sustainability PMO

FACILITIES

FY2017 marks the first year Booz Allen was able to include international offices in its facilities carbon footprint. The firm's U.S. and international real estate holdings comprise approximately 2.5 million square feet of leased space. We do not own or manage any of the office buildings our employees occupy; however, we've structured our space selection process, lease agreements, and employee sustainability programs to minimize energy use and resulting greenhouse gasses (GHG). All emissions related to our facilities are Scope 2.

OUR FY2017 GOALS

We're working toward reducing the carbon emissions intensity per employee (measured in full-time equivalents, or FTE) and per square foot of our leased space, when compared with baseline CY2014 levels. We're also making progress on previous years' targets and working with our facilities teams to develop a system to monitor and collect utility data, where available. Exhibit 3 details our top facilities-related sustainability goals and targets for FY2017.

Exhibit 3. FY2017 Sustainability Goals for Facilities

GOAL	TARGET	PROGRESS
Increase green office space	Convert leased office space to **LEED and Energy Star-certified** buildings	Approx. 74% of office space
	Evaluate all new office space using **green criteria**	✓
Reduce emissions intensity ratio	Reduce the intensity ratio of emissions produced per FTE **15% by 2026**	In progress
	Reduce the intensity ratio of emissions produced per square foot **15% by 2026**	In progress
Reduce employee electricity use	Install **power management** software on all devices	✓
	Maintain **Turn It Off program**	✓
	Investigate new tools to **track and manage** employee electricity consumption	In progress
Increase equipment efficiency	Procure only **Energy Star-certified** laptops and IT equipment	✓
	Increase virtualization of data center servers	79% virtualized
Reduce consumption and waste	**Recycle, reuse, and donate** office material generated during moves and renovations	227 tons recycled or donated in FY2017
	Streamline all office printing through **managed print services** (MPS); eliminate underutilized and inefficient printers; implement duplex printing as the default	✓
	Use paper with at least **30% recycled** content for MPS	✓
Use green office and kitchen supplies	Evaluate all core office supplies for **recycled content** and other green attributes	In progress
	Use only items with **recycled content or compostable qualities** in the firm's core kitchen supplies	In progress

✓ *Indicates targets that are complete or ongoing*

Source: Booz Allen Hamilton Sustainability PMO

In FY2017, we replaced 1,367 printers with 1,089 Energy Star-enabled Xerox devices in 86 U.S. offices. Each device uses 24% less energy than its predecessor.

HOW WE'RE MAKING IT HAPPEN

As much as possible, we negotiate our leases with sustainability in mind. We use U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) criteria and U.S. Environmental Protection Agency (EPA) Energy Star criteria to evaluate potential office space. We make leasehold improvements that use sustainable design criteria for all new fit-out projects, and we meet regularly with our property managers to improve our energy conservation efforts. Our facility strategy also includes leasing facilities that are within walking distance of easily accessible mass transit, where possible.

Booz Allen maintains a Turn it Off program that encourages our employees to turn off electronics, use natural light, and be energy conscious in their workday. We also reduce paper and waste by using managed print services, supporting office recycling and reuse programs, and working with suppliers to increase the green attributes of our office supplies. Our IT procurement office purchases only laptops and office equipment that are Energy Star-certified[1] to save energy.

In addition, we're reducing the amount of office space employees need by making workspaces more efficient and collaborative, enabling cloud technologies, and allowing managers to choose where their teams work based on day-to-day business needs. As these changes are completed, we expect the average carbon expended per employee and per square foot to decrease.

METHODOLOGY AND EMISSIONS CALCULATIONS

Many of our offices are located in buildings without individual metering capabilities. Consequently, we calculated our facilities carbon footprint by estimating electrical consumption based on occupied square footage.

We applied the industry standard from the U.S. Energy Information Administration (EIA) database[2] to determine average kilowatt per hour (kWh) consumption for commercial use.

[1] EPA, 2014. How a Product Earns the ENERGY STAR Label.
https://www.energystar.gov/products/how-product-earns-energy-star-label?c=products.pr_how_earn

[2] EIA, 2016. Table C21. Electricity consumption and conditional energy intensity by building size, 2012.
https://www.eia.gov/consumption/commercial/data/2012/c&e/pdf/c21.pdf

55% of new furniture in FY17 was made of recycled content.

We calculated our kWh consumption by multiplying the national average kWh per square foot by the square footage for each Booz Allen facility.

For U.S. facilities, we used EPA's 2015 GHG Emissions Factors[3] (provided by region) to calculate emissions and converted the resulting data from kWh to megawatts per hour (MWh). The formula we used to calculate emissions is:

GGHG Emissions = Electricity purchased in MWh x EPA regional GHG emissions factor

We consolidated nitrogen dioxide and methane by using global-warming potential emissions factors to convert them to CO2-e. For international facilities, we substituted EPA regional emissions factors[4] with International Energy Agency (IEA) CO2 emissions factors specific to each country.

Using this approach, Booz Allen's FY2017 facilities carbon footprint was estimated at 16,748.85 MT of CO2-e emissions, representing a 8.9-percent decrease from our FY2016 footprint of 18,382.82 MT of CO2-e emissions. Compared to the CY2014 baseline, there was a 25.8-percent decrease in emissions intensity per employee and 12.8-percent increase decrease emissions intensity per square foot (Exhibit 4).

Exhibit 4. Booz Allen's Carbon Footprint Intensity—CY2014 vs. FY2017

INTENSITY UNIT	CY2014	FY2017	% CHANGE
MT CO2-e per employee	0.982	0.73	-25.8%
MT CO2-e per square foot	0.0074	0.0065	-12.8%

Source: Booz Allen Hamilton Sustainability PMO

[3] EPA, 2015. Emissions Factors for Greenhouse Gas Inventories. Table 6: Electricity Emission Factors. https://www.epa.gov/sites/production/files/2016-09/documents/emission-factors_nov_2015_v2.pdf

[4] IEA, 2016. CO2 Emissions from Fuel Combustion. Table: IEA CO2kWh Data

BUSINESS TRAVEL AND COMMUTING

OUR FY2017 GOALS

Booz Allen does not own or operate a fleet of vehicles. Consequently, we focus our travel-related sustainability efforts on minimizing employee business travel and commuting, and we promote employee use of cleaner alternatives to traditional methods of transportation.

All relevant emissions are Scope 3. Exhibit 5 shows some of our key travel-related goals and targets for FY2017.

HOW WE'RE MAKING IT HAPPEN

Providing Workplace Flexibility

In FY2017 continued our Way We Work strategy to give employees the flexibility to work where they need to each day with expanded "centers of gravity" office spaces close to our key clients. The program uses an award-winning hoteling model at worksites around the world and has allowed the firm to reduce our environmental impact while improving employee quality of life.

71% of our preferred hotels are green certified.

Exhibit 5: FY2017 Carbon Reduction Goals for Business Travel and Commuting

GOAL	TARGET	PROGRESS
Reduce employee Travel	Promote **telework and hoteling** programs in new-hire orientations and employee communications	✓
	Analyze **employee travel behavior** and evaluate strategies for communicating environmental impact	In progress
Promote sustainable transportation	Develop and track employee **commuting carbon footprint**	In progress
	Increase awareness of travel and commuting **programs and incentives**	✓
	Evaluate and improve **onsite amenities for commuters** (bike racks, showers, lockers, etc.)	✓
	Encourage employee-led "Green Office Teams" to disseminate information on **local commuting options**	In progress
	Negotiate and build awareness of deep discounts (up to 50%) for **hybrid car rentals**	✓
Increase staff use of green hotels	Prioritize **sustainability requirements** when negotiating with hotels in our preferred hotel program	✓
	Increase **employee awareness** about preferred hotels' sustainability practices	✓

✓ *Indicates targets that are complete or ongoing*

Source: Booz Allen Hamilton Sustainability PMO

Encouraging Sustainable Commuting and Business Travel

Booz Allen encourages employees to take public transportation as much as possible. In the Washington, DC metro area, where our headquarters and most of our facilities are located, 60 percent of our offices are within walking distance (0.75 miles) of a Metrorail station and nearly all are in walking distance of a Metrobus stop. Many of our offices have bike racks and showers for staff who bike to work, and some of our major offices have electric-vehicle charging stations. We also provide incentives for employees who take advantage of public transportation, and our inter-campus shuttle buses use biodiesel fuel. For business travel, we work with our travel service provider to provide a carbon report with every trip itinerary.

75% of employees regularly telecommute.

METHODOLOGY AND EMISSIONS CALCULATIONS

Our calculations include estimated emissions from available information about employee business travel, including air travel, rental car mileage, and use of personal vehicles for work-related activities and commuting. For each mode of travel, we used an EPA Climate Leaders emissions factor[5] or similar emissions factor[6] to calculate the estimated CO2-e emissions. Data on employee rail travel was not included in the FY2017 calculations because recorded rail data represented only a small portion of actual rail travel mileage.

FY2017 AWARDS

- *AWE EcoLeadership Award 2011–2016*
- *Best Workplaces for Commuters 2007–2016*
- *Best Places to Work in Kentucky 2010–2016*
- *Fairfax County Environmental Excellence Award 2016*

[5] Air travel emissions factors sourced from: UK Department for Environment, Food, and Rural Affairs, 2011. 2011 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69314/pb13625-emission-factor-methodology-paper-110905.pdf

[6] GHG Protocol, 2015. GHG Emissions from Transport or Mobile Sources, Version 2.6. Available for download at: http://www.ghgprotocol.org/calculation-tools/all-tools

Business Travel—Air

For airline reservations made with our travel service provider, we receive information about each flight segment, including the mileage, seat class, and type of aircraft associated with each flight. We designated each flight segment by length (i.e., short, medium, or long flight) and seat class (i.e., economy, business, or first), and then converted the miles traveled to MT of CO2-e using the GHG Protocol tool for calculating CO2 emissions from mobile sources.[7]

It is important to note that a small minority of our employees were unable to make their travel plans using our travel service provider; consequently, a small portion of air travel reservations are not represented in the data provided. In addition, the data does not reflect flights that were cancelled or rerouted, or when travel plans changed (e.g., flights were not taken but remained in the system).

Based on available data, Booz Allen employees traveled 128,460,038 miles on domestic and international flights in FY2017, resulting in an estimated 21,500.39 MT of CO2-e emissions.

Business Travel—Automobile

For automobile travel, we calculated the total miles traveled by Booz Allen employees using reserved rental car mileage (domestic only) and billable mileage reported by employees for reimbursement. The data for rental car travel comes from our main rental car agencies (i.e., National, Enterprise, Avis, and Hertz), which provide us with quarterly reports identifying miles traveled, the size of the vehicle used, and the duration of travel. Rental cars reserved by employees using other vendors or methods were not factored into the emissions estimate as this data was unavailable.

To determine billable miles recorded by employees on their personal vehicles, we divided the total employee reimbursements allocated to miles traveled for work engagements in FY2017 by the per diem rate for personal vehicle mileage. We then converted the reported automobile mileage into CO2-e emissions the GHG Protocol tool for calculating CO2 emissions from mobile sources.[8] Based on available data, employee automobile travel (rental car and personal vehicles) released an estimated 5,835.81 MT of CO2-e emissions, representing a 4-percent decrease from FY2016.

Employee Commuting

In FY2017, we expanded the firmwide survey launched the preceding year to estimate the carbon footprint associated with employee commutes to and from work. The survey included new questions designed to provide a more complete picture of the distance employees commute and the modes of transportation they use.

Using guidance provided by the GHG Protocol,[9] we converted the average daily commuting distance into annual estimates for each mode of transportation. We then used the GHG Protocol tool to determine the CO2-e emissions produced for each mode. Because survey data did not include fuel type used in personal vehicles, the tool provided estimates for methane and nitrous oxide emissions, but not CO2 emissions. We determined that Booz Allen employees produced an estimated 6,298.03 MT of CO2-e in FY2017, representing a 48.19-percent increase over the preceding year.

[7] EPA Climate Leaders, 2008. GHG Inventory Protocol Core Module Guidance: Optional Emissions from Commuting, Business Travel and Product Transport.

[8] Ibid

[9] GHG Protocol, 2013. Technical Guidance for Calculating Scope 3 Emissions. Category 7: Employee Commuting. Available for download at: http://www.ghgprotocol.org/feature/scope-3-calculation-guidance

Much of this increase can be attributed to the redesign of the survey, which encouraged participants to report modes of transportation not captured in the survey's first iteration. The results were also heavily skewed by a doubling of the number of participants when compared with the preceding year, as well as by a dramatic shift in the demographic distribution of participants. We are evaluating strategies to increase the rate of participation, which remains relatively low, and to obtain a demographic spread among participants that is more reflective of the firm as a whole.

TOTAL BUSINESS TRAVEL AND COMMUTING EMISSIONS

Based on available data, Booz Allen's FY2017 carbon footprint for employee business travel, excluding employee commuting, was estimated at 27,335.81 MT of CO2 emissions—slightly lower than FY2016. In addition, Booz Allen's carbon footprint for employee commuting was estimated at 6,298.03 MT of CO2-e.These are conservative estimates; emissions calculations are limited by the data available and not all mileage estimates or fuel types could be accounted for. However, we place a high priority on improving the quality of our data and are evaluating strategies to increase data capture.

About Booz Allen

For more than 100 years, business, government, and military leaders have turned to Booz Allen Hamilton to solve their most complex problems. They trust us to bring together the right minds: those who devote themselves to the challenge at hand, who speak with relentless candor, and who act with courage and character. They expect original solutions where there are no roadmaps. They rely on us because they know that—together—we will find the answers and change the world. To learn more, visit BoozAllen.com.

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