
2014 Booz Allen Carbon Footprint



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Photos in this document were submitted by Booz Allen Hamilton employees for our annual Earth Day Photo Contest.

Cover Photo by:
Renis Nishku, Booz Allen

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Photo by: Shane Gilbert, Booz Allen

INTRODUCTION

OUR COMMITMENT TO SUSTAINABILITY

Booz Allen Hamilton, a leading strategy and technology consulting firm, is committed to sustainable growth through our client work, our community partnerships, and our employees' efforts to operate responsibly as stewards of our environment. We formalized our environmental commitment in 2010 with our corporate sustainability statement, our firmwide sustainability program, and the implementation of our ISO 14001 Environmental Management System. Booz Allen strives to continually evaluate and improve sustainability in our operations, and we help our clients achieve their sustainability goals and reporting requirements through innovative environmental service offerings.

As part of our commitment to sustainability, Booz Allen works to accurately calculate and reduce our most significant environmental impact—our carbon footprint. To accomplish this, we analyze emissions related to fuel and energy use from our leased facilities and employee travel, and we implement firmwide strategies to minimize this use. We also support paper and waste reductions by using managed print services, establishing office recycling and reuse programs, and working with suppliers to increase the green attributes of our office supplies. Exhibit 1 shows Booz Allen's key carbon-related sustainability goals for 2014.

Exhibit 1. 2014 Sustainability Goals

Increase Green Office Space	✓
Reduce Employee Electricity Use	✓
Increase Equipment Efficiency	✓
Reduce Paper Consumption and Waste	✓
Use Green Office and Kitchen Supplies	✓
Reduce Employee Travel	✓
Promote Sustainable Transportation	✓
Increase Staff Use of Green Hotels	✓

Source: Booz Allen Hamilton

OUR APPROACH TO REDUCING OUR CARBON FOOTPRINT

GREENING OUR FACILITIES

Reporting and reducing our energy use (and related greenhouse gas [GHG] emissions) for our office space is a complex challenge. As a consulting firm, our products are primarily our people and intellectual capital. Our office spaces are leased near our client locations, allowing our staff to be responsive to clients' evolving needs. Booz Allen does not own any of the buildings we occupy in the United States; we use an internally developed Greening Checklist (based on Leadership in Energy and Environmental Design [LEED] standards) to evaluate potential office space for its compliance with LEED and US Environmental Protection Agency (EPA) ENERGY STAR® standards. Approximately 74 percent of our leased office space is in ENERGY STAR or LEED-certified buildings.

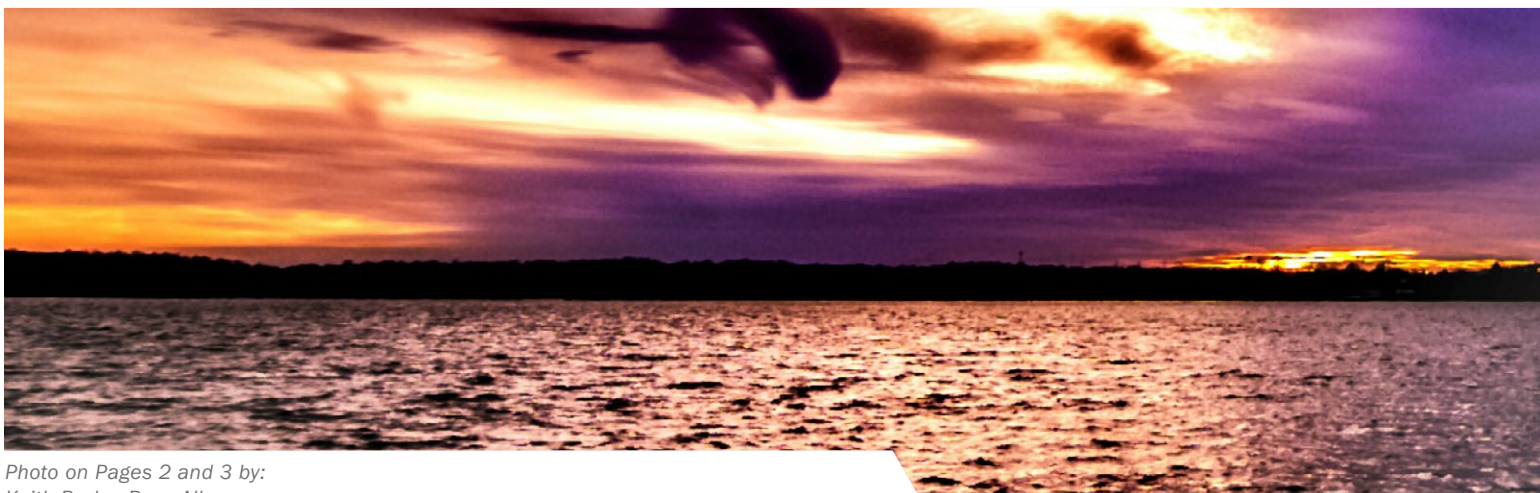


Photo on Pages 2 and 3 by:
Keith Burke, Booz Allen

Leasing office space makes it difficult to track energy use and set reliable targets because the vast majority of the buildings do not have individual metering capabilities; however, our facility and building management teams work together closely to ensure that as many LEED practices as are feasible are incorporated into the leased spaces we occupy. Booz Allen is continually reevaluating our spacing requirements, closing some locations as leases expire and leasing new spaces in close proximity to where they are needed. This planned flexibility enables us to respond to our clients' needs more rapidly while also reducing our environmental footprint.

PROVIDING WORKPLACE FLEXIBILITY

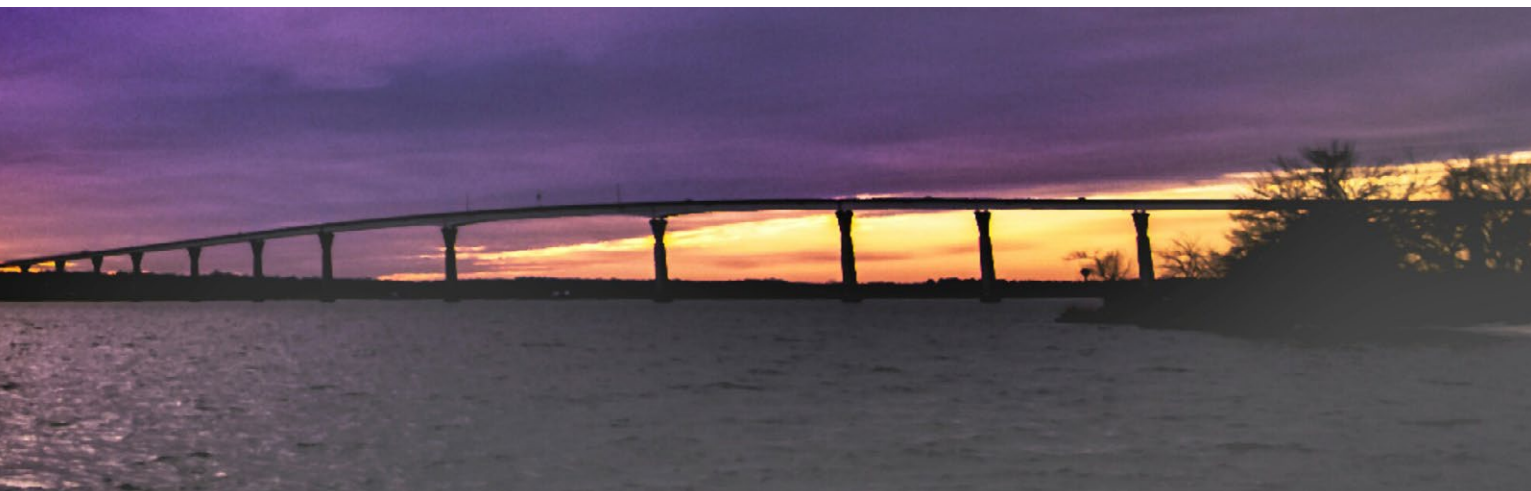
In 2010 in an effort to further reduce our footprint, Booz Allen began a major realignment of staff in our McLean, Virginia, headquarters vicinity to reassign staff to offices closest to their home zip code. The majority of our staff are assigned to client locations, but for our remaining staff we offer a hoteling office model so employees can choose between working from a convenient office location or teleworking from home. This hoteling model has allowed the firm to reduce the number of office buildings we occupy, and has allowed employees to have a more productive work day with less commuting time for a better work-life balance.

ENCOURAGING SUSTAINABLE COMMUTING

Booz Allen encourages employees to take public transportation as much as possible. Many of our urban office buildings are located near public transportation. Our headquarters is conveniently located less than one block from the Greensboro Silver Line Metro Station, with a major commuter bus stop across the street. We also encourage employees to use other environmentally friendly modes of transportation. Many of our offices have bike racks and shower facilities for staff who bike to work. Some of our major offices have electric-vehicle charging stations. We provide several incentives for employees who take advantage of public transportation, including a transit reimbursement program and access to the NuRide rewards program.

Booz Allen has received a number of awards and recognitions for our innovative solutions, including—

- An award for our telework program from the National Capital Region Transportation Planning Board's Commuter Connections (2012)
- Recognition as one of the Best Workplaces for Commuters (multiple years)
- An EcoLeadership award from the Alliance for Workplace Excellence (AWE) (multiple years)
- Recognition as a Certified Platinum GSA Expo Top 10 Sustainable Exhibitor (2012).



WHAT TO EXPECT IN THIS REPORT

This carbon footprint report focuses on activities from calendar year 2014 related to energy consumption at our facilities and emissions from recorded employee travel. All relevant emissions are scopes 2 and 3, and emissions estimates are expressed in metric tons (MT) of carbon dioxide (CO₂) equivalents (CO₂-e). Exhibit 2 shows Booz Allen's calendar year 2014 carbon footprint was 48,190.09 MT of CO₂-e emissions.

Approximately

74 percent

of our leased office space is in ENERGY STAR® or LEED-certified buildings.

Exhibit 2. 2014 Booz Allen Carbon Footprint

	EMISSIONS (MT OF CO ₂)
Facilities	21,088.69
Business Travel	27,101.40 ¹
Total CO ₂ Emissions	48,190.09

Source: Booz Allen Hamilton

This report provides an overview of the carbon footprint methodologies we used. The methodologies include assumptions and data gaps for the estimated emissions calculated for energy consumption at our leased facilities and recorded employee business travel.

1. Updated from previously reported 2014 emissions to correct on an error found in business travel emissions calculations.

FACILITIES

Booz Allen does not own or manage any of the 138 office buildings our employees occupy in the United States. Reporting and reducing our energy use and related GHG emissions at each facility is a challenge. We encourage our employees to turn off electronics, use natural light, and be energy conscious in their work day. Our information technology (IT) procurement office purchases only laptops and office equipment that are ENERGY STAR-certified² to save energy. Where possible, our leased facilities are US Green Building Council LEED certified or located near transit stations. In the Washington, DC, metro

area, where most of our facilities are located, 60 percent of our office buildings are within walking distance (0.75 miles) of a Metrorail station. Booz Allen meets regularly with our property managers to improve our energy conservation efforts. In addition, Booz Allen's dedicated Sustainability Program Management Office continues to investigate tools to track and monitor our energy use, as well as new ways to communicate office sustainability practices. Exhibit 3 details our top facilities-related sustainability goals and targets for 2014.

Exhibit 3. 2014 Sustainability Goals for Facilities

GOAL	TARGET	PROGRESS
Increase Green Office Space	Convert leased office space to LEED and ENERGY STAR-certified buildings	74% of Office Space
Reduce Employee Electricity Use	Implement aggressive "turn It off" program	✓
	Install power management software on all devices	✓
	Investigate new tools to track and manage employee electricity consumption	In Progress
Increase Equipment Efficiency	Use print shop printers with components that are up to 97% reusable or remanufacturable	✓
	Procure only ENERGY STAR-certified laptops and IT equipment	✓
	Increase virtualization of data center servers to reduce energy consumption	40% Virtualized
Reduce Paper Consumption and Waste	Streamline all office printing through managed print services (MPS)	✓
	Use only paper with at least 30% recycled content for MPS and the print shop	✓
	Achieve zero paper waste in the print shop (i.e., 100% recycling of all nonproprietary paper)	✓
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

Source: Booz Allen Hamilton

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

HOW WE CALCULATED EMISSIONS

For many of our offices, we calculated the carbon footprint by using occupied square footage to determine estimated electricity consumption in the absence of data on actual electricity use (e.g., meter readings or utility bills). We applied the industry standard from the US Energy Information Administration (EIA) database³ to determine average kilowatt per hour (kWh) consumption for commercial use. The EIA database contains average electricity use for buildings per square foot, otherwise known as the energy intensity. We calculated total kWh consumption by taking the national average of kWh per square foot, multiplied by the square footage for each Booz Allen facility.

Using EPA's 2010 GHG Emissions Factors⁴ (provided by region) to calculate emissions, we converted the resulting data from kWh to megawatts per hour (MWh). The formula we used to calculate emissions is:

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

We consolidated nitrogen dioxide and methane by using global-warming potential emission factors to convert them to CO₂-e. Exhibit 4 presents an example how we applied this approach to one of our Washington, DC, offices to calculate GHG emissions.

Exhibit 4. Calculation Example for Office Facility Emissions

REGION	DC/901 15th Street
SQ FT	87,413.00
KWH/SQ FT (NATIONAL AVG)	16.40
TOTAL KWH USAGE	1,433,573.20
MWH	1,433.57
LBS CO ₂	1,358,195.92
LBS CH ₄	808.02
LBS N ₂ O	6,648.34
TOTAL GHG (POUNDS OF CO ₂ -e)	1,365,652.28
TOTAL GHG (CO ₂ -e MT)	619.46

Source: Booz Allen Hamilton

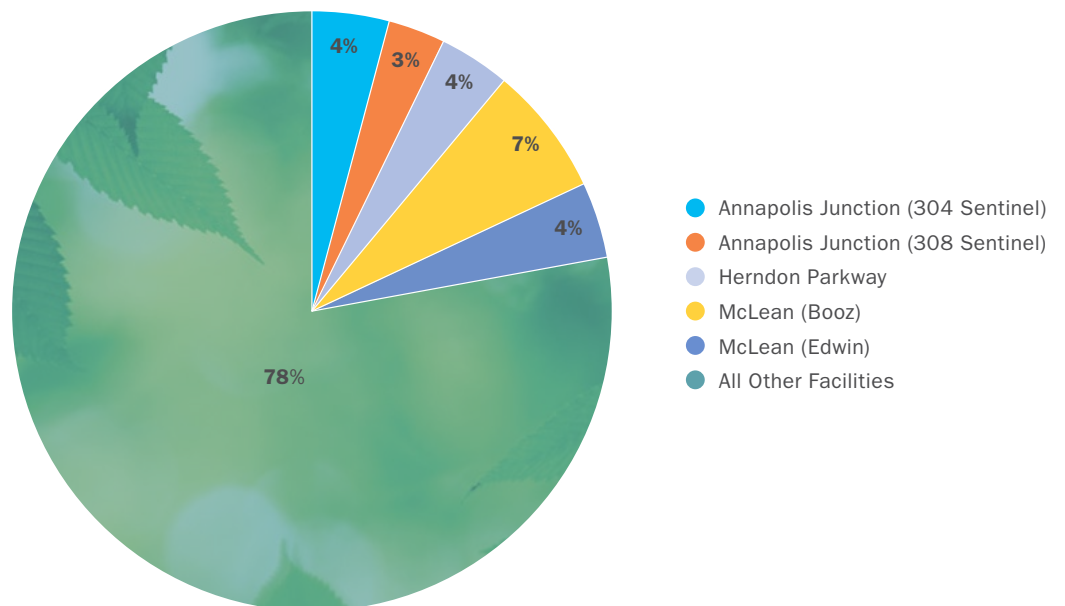
3. EIA, 2003. Table C21A: Electricity Consumption and Conditional Energy Intensity by Building Size for Non-mall Buildings. http://www.eia.gov/consumption/commercial/data/archive/cbecs/cbecs2003/detailed_tables_2003/2003set15/2003html/c21a.html

4. EPA, 2010. "eGRID2010 year 2010 subregion GHG output emission rates." https://www.epa.gov/sites/production/files/2015-02/documents/egrid_9th_edition_v1-0_year_2010_ghg_rates.pdf

TOTAL FACILITIES EMISSIONS

Using the above approach, Booz Allen's 2014 carbon footprint for our leased space facilities was estimated at 21,089 MT of CO₂-e emissions. This figure represents a 6-percent decrease from our 2013 facilities footprint of 22,374.93 MT of CO₂-e emissions. Exhibit 5 illustrates percentages attributed to Booz Allen's top six largest office locations, with combined percentages for all other leased office facilities.

Exhibit 5. 2014 GHG Emissions by Location



Source: Booz Allen Hamilton

BUSINESS TRAVEL

Most of our DC Metro offices are within walking distance of a Metrorail station.

Booz Allen does not own a fleet of vehicles. Consequently, we focus our travel-related reduction efforts on minimizing employee travel and promoting employee use of cleaner alternatives to traditional fuels. We developed an award-winning hoteling model that allows staff to work closer to where they live, and we aggressively use teleconferencing and web conferencing to eliminate travel where possible. We also shifted our inter-campus shuttle buses to bio-diesel fuel and promote hybrid car rental use by negotiating rates up to 50 percent lower than published rental rates. In addition, we work with our travel service provider to provide a carbon report with every trip itinerary so employees can consider their potential carbon footprint when making travel plans. Exhibit 6 shows some of our key travel-related sustainability goals and targets for 2014.

HOW WE CALCULATED EMISSIONS

We work with our travel service provider to record employee business travel (rental car and airline) miles. For airline reservations made with our travel service provider, we receive information about each flight segment, including mileage and the type of aircraft associated with each flight. For rental car mileage, Booz Allen receives quarterly reports identifying miles traveled, rental car size used, and duration of travel. This 2014 carbon footprint report includes estimated emissions from available information about our employee business travel, including air travel, rental car mileage, and use of personal vehicles for work-related activities. Each mode of travel used an EPA Climate Leaders emissions factor⁵ or similar emissions factor⁶ to calculate the estimated CO₂-e emissions

Exhibit 6: 2014 Carbon Reduction Targets for Travel

GOAL	TARGET	PROGRESS
Reduce Employee Travel	Promote telework and hoteling programs in new-hire orientations and employee communications	✓
	Add tips on teleconference alternatives to the employee travel booking tool	In Progress
Promote Sustainable Transportation	Develop an 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.)	In Progress
	Negotiate and build awareness of deep discounts for hybrid car rentals	Up to 50% lower than published rates
Increase Staff Use of Green Hotels	Prioritize sustainability requirements when negotiating with hotels in our preferred hotel program	✓
	Give employees easy access to information about preferred hotels' sustainability practices	✓

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

6. Air travel sourced from: Department for Environment Food and Rural Affairs (2011); 2011 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting. Status Final; Version 1.0; updated July 7, 2011.

(Exhibit 6). Data on employee rail travel was not included in the 2014 calculations. In previous years, this data only represented a small portion of actual rail travel mileage, as the majority of employees purchased rail tickets directly from rail service providers and mileage traveled was unavailable (and only documented for reimbursement). Data on employee commuting (i.e., daily travel to and from the workplace) was also unavailable for 2014 calculations; however, we have implemented measures to include this information in future reports, including the development of a firmwide commuter survey.

AIR TRAVEL: For air travel, total miles traveled domestically and internationally were provided by our travel service provider for all recorded employee air travel. It is important to note that a small minority of our employees are 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, particularly when an employee purchases flights directly from

the airline (via an airline website or at the counter) or another travel service provider. In addition, when flights are cancelled or rerouted, or when travel plans change (e.g., flights are not taken), the data does not reflect these incidents and some flights are retained in the system. Employee travel using other travel service providers or airline vendors and changes in travel plans are not factored into the emissions estimates, as they are unknown.

Each flight segment was reviewed and designated as a short (<300 miles), medium (≥300 to <2,300 miles), or long flight (≥2,300 miles), depending on the distance traveled. Identifying flights by the distance traveled is the most accurate approach, allowing us to apply the miles traveled to an associated emission factor. The recorded flight mileage based on distance traveled was converted into pounds of CO₂ using the associated air travel emissions factors for short (0.28 kg/unit), medium (0.16 kg/unit), and long flights (0.18 kg/unit).

Based on available data, in 2014, Booz Allen employees traveled 111,467,812

Exhibit 7. Footprint Calculation for Employee Business Travel

MODE OF TRANSPORTATION	TYPE	DISTANCE TRAVELED (MILES)	CO ₂ EMISSION FACTOR (KG/UNIT)	CO ₂ EMISSIONS (KG/UNIT)	TOTAL GHG (CO ₂ IN MT)
Air Travel	Short Flight	4,366,515	0.28	1,170,164	1,170.16
	Medium Flight	69,577,305	0.16	12,137,332	12,137.33
	Long Flight	37,523,992	0.18	6,753,844	6,753.84
Automobile Travel (Gas/Petrol)	Rental	14,061,307	0.364	5,118,316	5,118.32
	Personal	5,279,537	0.364	1,921,751	1,921.75

Source: Booz Allen Hamilton

miles on domestic and international flights (Exhibit 7). The majority of flights traveled (72 percent) were medium flights (≥ 300 miles). Booz Allen employee air travel in 2014 released an estimated 20,059.92 MT of CO₂ emissions in 2014.

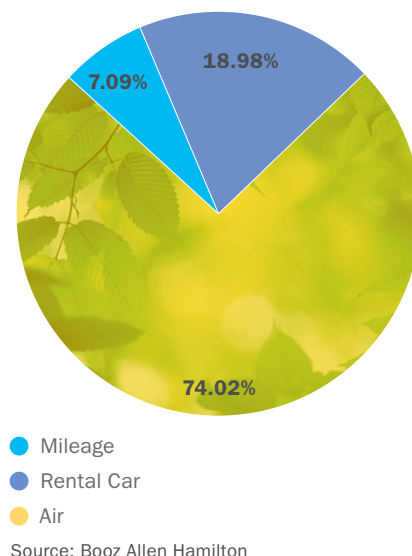
AUTOMOBILE TRAVEL: For automobile travel, we calculated the total miles traveled by Booz Allen employees for reserved rental car mileage (domestic only) and billable mileage reported by employees for reimbursement. Our main rental car agencies (i.e., National, Enterprise, Avis, and Hertz) provided mileage data via quarterly reports. The majority of employee rental car reservations were made either through our travel service provider or directly with the rental car agency by telephone reservations, counter reservations, walk-up requests, or online. Rental cars reserved by employees using other vendors or methods were not factored into the emissions estimate, as the data was unavailable. This approach used miles traveled, as reported by the rental car agencies.

We divided the total employee reimbursements allocated to miles traveled for work engagements in 2014 by the per diem rate for personal vehicle mileage (0.555). We converted the reported automobile mileage into CO₂-e emissions using the EPA Climate Leaders emissions factors for gasoline/petrol cars (0.364 kg/unit).⁷ As shown in Exhibit 6, based on available data, employee automobile travel (rental car and personal vehicles) released an estimated 7,040.07 MT of CO₂-e emissions.

TOTAL BUSINESS TRAVEL EMISSIONS

Based on available data, Booz Allen's carbon footprint for employee business travel was estimated at close to 131 million air and road miles traveled, for a total of 27,101.40 MT of CO₂-e emissions. This is a conservative estimate; emissions calculations are limited by the data available and not all mileage estimates could be accounted for. We are placing a high priority on improving the quality of our data and are evaluating strategies to increase data capture. The majority of our travel emissions result from our air travel (74.02 percent), as illustrated in Exhibit 8.

Exhibit 8. 2014 Booz Allen CO₂ Emissions by Travel Mode



7. Emissions for 2014 air travel have been updated from previously reported figures to correct an error found in emissions calculations for air travel.



About Booz Allen

Booz Allen Hamilton has been at the forefront of strategy and technology for more than 100 years. Today, the firm provides management and technology consulting and engineering services to leading Fortune 500 corporations, governments, and not-for-profits across the globe. Booz Allen partners with public and private sector clients to solve their most difficult challenges through a combination of consulting, analytics, mission operations, technology, systems delivery, cybersecurity, engineering, and innovation expertise.

With international headquarters in McLean, Virginia, the firm employs more than 22,500 people globally, and had revenue of \$5.27 billion for the 12 months ended March 31, 2015. To learn more, visit www.boozallen.com. (NYSE: BAH)

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