Broadcasting Board of Governors

2016 Strategic Sustainability Performance Plan

June 16, 2016

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Policy Statement

BROADCASTING BOARD OF GOVERNORS
INTERNATIONAL BROADCASTING BUREAU

June 16, 2016

SUBJECT: Policy and Strategy for Implementing Executive Order (EO) 13693, Planning for Federal Sustainability in the Next Decade

The mission of the Broadcasting Board of Governors (BBG) is to inform, engage and connect people around the world in support of freedom and democracy. The BBG is an independent federal government agency that oversees U.S. civilian international media. It distributes programming in 61 languages to more than 100 countries via radio (satellite, FM, medium wave (AM), and shortwave) terrestrial and satellite TV, the web, live streaming, mobile devices, and social media to a record weekly global audiences of 215 million people.

As an agency of the federal government, the BBG is committed to complying with environmental and energy statutes, regulations, and EOs. In addition, the BBG is committed to developing a better understanding of the effects of climate change, and addressing climate change adaptation.

In keeping with this commitment, the BBG has prepared an executive summary highlighting the challenges it faces and the successes it has achieved in implementing the various requirements of strategic sustainability. The executive summary also highlights the BBG’s future plans for strategic sustainability.

Though a small agency, we will continue to explore and implement various strategies over the next several years that, if successful, will improve the BBG’s energy posture and enable it to better meet the challenging goals established by EO 13693.

Sincerely,

Mark Filipak
Director, Operations & Stations Division
Office of Technology, Services and Innovation
Chief Sustainability Officer
EXECUTIVE SUMMARY

The Broadcasting Board of Governors (BBG), in accordance with the U.S. International Broadcasting Act of 1994 (as amended), oversees U.S. civilian international media. The BBG distributes programming in 61 languages to more than 100 countries via radio (satellite, FM, medium wave (AM), and shortwave), terrestrial and satellite TV, the web, live streaming, mobile devices, and social media to a record weekly global audiences of 215 million people.

1. Vision: For FY 2016, the Agency will continue to focus on:

a. Reducing broadcast programming hours, which should result in additional electricity savings.

b. Providing a robust telework program, which should have a positive impact on employee commuting.

c. Transitioning from old methods of program distribution to new ones, which has implications for the Agency’s strategic sustainability and climate change adaptation.

d. Maintaining its aging infrastructure, with emphasis on performing corrective and preventive maintenance on the large antenna systems, during this period of transition. These actions have implications for the Agency’s strategic sustainability and climate change adaptation.

2. Leadership:

a. The BBG consists of federal and non-federal elements. The federal element includes the International Broadcasting Bureau (IBB), the Voice of America (VOA) and the Office of Cuba Broadcasting (OCB). The IBB manages program distribution and marketing for the Agency and provides administrative support for VOA and OCB.

b. The Agency uses a decentralized approach to integrate energy management into its policy, planning, and budget processes. For this reason, the Agency has not assigned specific individuals to an Agency energy team; however, the Agency has identified staff responsibilities for implementing the various aspects of its energy management program. The following are key staff offices involved in this process:

(1) Within the IBB, the Office of Technology, Services and Innovation (TSI) oversees and manages a broad array of technical and infrastructure functions, including delivering program content for all BBG networks, and providing information technology support to many offices throughout the Agency. TSI strives to distribute BBG content in the most cost-effective and efficient way possible. It manages more than 90 transmitting sites worldwide that deliver shortwave, medium wave, FM, and TV broadcasts. TSI also leases broadcast time at 12 transmitting sites in 11 countries. TSI is also responsible for coordinating BBG’s strategic sustainability planning effort.

(2) Within TSI, the Operations & Stations Division (T/EOS) is responsible for the day to day operations of the Agency’s Transmitting Station Network, which is the Agency’s largest user of electricity. For this reason, the T/EOS Director provides overall guidance and direction for the Agency’s energy management program and serves as the Agency’s Chief Sustainability Officer (CSO). In order to accomplish this large endeavor, the Agency also tasked its senior managers to assist the CSO in implementing various portions of this plan.

(a) Electronic Stewardship: Requirements in this area involve TSI’s Information Technology Directorate (T/I) and Network Support Branch (T/EOS/N), as well as, the Office of Contracts (CON).
(b) Federal Employee Business Travel: Requirements in this area involve the Office of the Chief Financial Officer (CFO).

(c) Federal Employee Commuting: Requirements in this area involve the Office of Human Resources (OHR).

(d) Sustainable Acquisition: Requirements in this area involve CON.

3. **Integration:** The Agency’s strategic plan and annual budgets address how the Agency will accomplish its mission in the future and the costs involved in these efforts. While these documents do not address strategic sustainability directly, some of the actions proposed will have a direct impact on the Agency’s future strategic sustainability performance, and will improve the Agency’s overall energy profile.

4. **Evaluation Measures:** The CSO evaluates the Agency’s success in meeting its goals, and refines the process, if required, based on an assessment at the end of each fiscal year.

5. **Performance Summary Review:**

a. **Progress and Highlights:** Although we are a small Agency, we continue to work at improving our energy and environmental sustainability posture, and our successes demonstrate our commitment to the strategic sustainability process. Some of the Agency’s achievements in FY 2015 and FY 2016 (to date) follow:

   1. Currently, the Agency is on track to meet its greenhouse gas (GHG) reduction goals for reducing both Scope 1 & 2 GHG and Scope 3 GHG emissions. For FY 2015, the Agency reduced its Total (Target, Non-Target, and International) Scope 1 and 2 GHG emissions by 3.5% when compared to FY 2014, and by 37.4% when compared to the FY 2008 baseline. The Agency also reduced its Total (Target, Non-Target, and International) Scope 3 GHG emissions by 2.2% when compared to FY 2014, and by 28.3% when compared to the FY 2008 baseline. The Total Scope 1, 2, and 3 GHG emissions combined was reduced by 3.3% when compared to FY 2014 and by 36.3% when compared to the FY 2008 baseline.

   2. Lighting:

   a. The Germany Transmitting Station continues to make energy saving improvements by replacing all fluorescent magnetic ballasts with electronic devices that have an efficiency factor of 98%. In addition, the station continues to replace its fluorescent tubes with LED-tubes, which saves 50% electrical power each, and its 250W neon aviation warning lights with 10W LED lighting.

   b. The Greenville Transmitting Station replaced its compound security lighting with energy saving LED fixtures. In addition, the station continued with the replacement of its indoor fluorescent lighting fixtures with LED fixtures.

   c. The Northern Marianas Transmitting Station is replacing its street lighting with LED street lighting. It is anticipated that this action will decrease power consumption by approximately 15.6kW per day, and save approximately $2,000 in FY 2016. Also, a new lighting procedure is being implemented to turn off all lights in the individual transmitter rooms during unmanned operations, and reduce the lighting used at other times to the minimum intensity needed for checking the equipment. These actions will save approximately 4,106kW hours annually, with a cost savings of approximately $1,400.

   d. The Sri Lanka Transmitting Station replaced the 500W halogen lamps in the Main Security Guard Hut with LED floodlights, which use 80% less energy.
(3) Facility Renovations and Equipment Upgrades:

(a) The Germany Transmitting Station made number of energy saving improvements this year. The station replaced its R22-containing air conditioning systems with highly efficient R410A-containing inverter systems, and completed replacing all windows and outside doors with double insulated and sealed doors and windows. The radiator furnace heating system was also upgraded by installing radio controlled thermostats. In addition, the station installed an energy saving heat pump at the Guard Shack and an air/water heat pump at the Administration building. The station also made transmitter cooling system improvements with the installation of automatic thermal controlled louvers as part of the transmitter air/water cooling system.

(b) The Greenville Transmitting Station installed two replacement hot water heaters at the facility that were ‘Energy Star’ rated devices.

(c) The Sri Lanka Transmitting Station continued to replace defective conventional window type and split type air conditioners with the 40% energy efficient, inverter-type air conditioners. The station also replaced its top loading washing machine with an energy/water efficient frontloading unit. The new washer uses 30% less electricity and 60% less water when compared to the old unit.

(d) The Philippines Transmitter Station completed replacing the typhoon-damaged insulated roofs at its Tinang Transmitting Site. The Greenville Transmitting Station also completed a major insulated roof replacement project.

(4) Fuel:

(a) The volume of gasoline and diesel fuel used at the transmitting stations for building and grounds maintenance is low with only 14,615 gallons used in FY 2015. However, this represents a 20% reduction in the amount of gasoline and diesel fuel used for this purpose when compared to FY 2014.

(b) The Sri Lanka Transmitting Station now allows livestock from nearby farms to graze on designated areas of station property. This action allowed the station to idle two John Deere tractors, two ride-on bush cutters, and several weed whackers, which normally would be in use daily. This change has decreased the station’s annual diesel consumption by 1,352 gallons, and annual petrol consumption by 352 gallons.

(c) The Sao Tome Transmitting Station, which generates all its electrical power, and the Northern Marianas Transmitting Station, which generates a significant amount of electrical power due to frequent commercial power outages, now use low sulfur content diesel fuel to operate their large generators, which helps reduce the sulfur dioxide emissions normally occurring in diesel generator operations.

(d) In an effort to save fuel, the Northern Marianas Transmitting Station reduced its generator testing schedule. It now only conducts a weekly test and only when commercial power is unavailable. With the same goal in mind, the Botswana Transmitting Station reduced its long distance supply runs, which are needed to purchase all important items that are not available in local shops, to one trip every two months.

(e) Primarily driven by the disposal of its A-Site facility, the Greenville Transmitting Station reduced its motor vehicle fuel consumption from 817.70 gallons in FY 2014 to 346.20 gallons in FY 2015, or 58%.

(f) In FY 2015, the Sri Lanka Transmitting Station reorganized staff transportation, consolidated shift hours, and limited driving to essential trips, which reduced diesel fuel usage for the station’s motor vehicles by 2,260 gallons per year.
(g) The Thailand Transmitting Station switched all station vehicles that used gasoline to gasohol, which contains 10% ethanol fuel.

(5) Water:

(a) The Botswana Transmitting Station uses non-potable water for watering the landscaping and cleaning its facilities. While the station has two sites, it draws its non-potable water from a well located at its medium wave site. In FY 2015, in order to make the non-potable water more readily available to other locations throughout the two sites, the station ran a pipeline to the shortwave site from the medium wave site. This expanded use of non-potable water has helped the station reduce its potable water consumption, which must be purchased from the local water utility.

(b) The Northern Mariana Transmitting Station uses a water catchment system to provide 58% of water consumed at the station.

(c) The Philippines Transmitting Station continues to save potable water at its Tinang facility by using a reconfigured water piping system to supply non-potable vice potable water to its motor vehicle washing bay.

(d) To increase water conservation, the Sri Lanka Transmitting Station has discontinued using water for landscaped areas.

(6) Black Heating Transmitting Tube Filaments: Black heating is a method used to significantly reduce the voltage applied to a transmitting tube filament when the transmitter is not transmitting, which saves power. In recent years, two of our transmitting stations have experimented with black heating with good results. In February 2015, the Sri Lanka Transmitting Station commenced operating its four Marconi transmitters in black heat mode during non-programing periods. This has resulted in an 82,000kWh per month reduction in consumed power, with an approximate cost savings of $20,000 per month. The Thailand Transmitting Station, which has used black heating for a number of years and continues to refine how it employs this process, estimated that the use of black heating on all its transmitters at its Udorn Transmitting Site results in power reductions of about 1,260,000kWh/year, with an annual savings of approximately $129,000.

(7) Multi-Modal Access:

(a) Telecommuting and Teleconferencing:

(i) Open Space Design Project: The Agency continues the process of converting, where practical, the office space in its Washington Headquarters from individual private offices to a more modern and open workspace. This multiyear project will reduce the Agency’s rental costs, facilitate the greater use of wireless office technology, and create an office environment that encourages telework and teleconferencing, as the conference rooms within the open space are set up to promote teleconferencing. It will also help the Agency shrink its footprint by reducing the amount of square footage required to operate.

(ii) Telework: The Agency’s already robust telework program was further enhanced this year. Under the revised program, an Agency employee can be approved to telework up to eight days per pay period, which is a four day per pay period increase. In addition, a shared work station effort was recently implemented to provide shared office workspace for those employees who telework six days or more.
(b) Carpooling and the use of Public Transportation: The Agency continues to support these efforts by providing free parking space to employees who carpool to work. The Agency also has a large number of employees receiving transit benefits for commuting by bus or rail.

(c) Bicycling: The Agency has small number of bike racks available for employees to use and these employees are also eligible to use the shower facilities in the Agency’s gym. In addition, there are two air pumps installed for use on bicycles.

b. Challenges:

(1) As highlighted last year, the Agency is going through a period of change, as it transitions its focus away from traditional broadcast delivery systems (shortwave and medium wave transmitters housed at its larger transmitting stations) where they are no longer effective to FM radio, TV, and “less expensive digital delivery systems that are growing in effectiveness, e.g., satellite and Internet radio, mobile phone technologies and social media”. The transition will be a multi-year process. As part of this transition process, the Agency will identify which of its larger transmitting facilities will remain central to the Agency’s future operating environment. Once these key facilities are identified and this information becomes available, improvements can be made to these facilities that will enhance their strategic sustainability and ability to adapt to a changing climate.

(2) The Agency has an aging infrastructure that needs to be maintained, even though many of these facilities are being evaluated for reduced missions or closure in the future. As the Agency’s transition continues, ensuring that critical maintenance and repair (M&R) needs of the larger transmitting stations are addressed is essential as they currently continue to play a key role in delivering the Agency’s programming. This process is hindered by a number of factors, which include:

(a) Limited funding available for the M&R program.

(b) Climate and environmental issues that drive the maintenance program at seven of these transmitting sites. Six sites are particularly vulnerable to corrosion because of their proximity to salt and moisture from the seas and winds. The Botswana Transmitting Station, the seventh site, is located near a smelting plant, and the pollution from the plant creates a corrosive environment. The antenna systems at all these sites are particularly affected.

(c) In addition to having an environmental impact on the equipment, the smelting plant, mentioned above, emits a high level of sulfur dioxide into the atmosphere, which will require the installation of an air filtration system for the Botswana Transmitting Station’s administration and transmitter buildings.

(d) Still recovering from the impact of two tropical storms in FY 2013 that damaged many of the antenna structures at the Sri Lanka Transmitting Station. These antennas already had sustained severe corrosion damage due to their proximity to the ocean. The storm-related repairs coupled with the repairs necessary to remediate the corrosion damage have been time consuming and very expensive.

(3) Implementing the clean and renewable energy requirements of the new EO 13693 will be very challenging. From an energy standpoint, the Agency is very electricity-centered, and currently, it does not use any clean or renewable energy. Most of its domestic workspace is rented through GSA. Of the three domestic transmitting stations where the Agency owns the property, only three buildings exceed 5,000 square feet in size. The Greenville Transmitting Station was evaluated in 2012 by an architectural and engineering (A&E) firm, which concluded that the station cannot be brought into 100% compliance with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings due to the age of the facility and the amount of funds that would be required to obtain this objective. In the same
light, using wind power at the Northern Marianas Transmitting Station was studied in 2011 but it was determined that using wind power was not feasible. While the Agency will continue to look for opportunities to transition to clean and renewable energy, anticipated funding levels and limited facilities to work with will slow this effort.

c. Strategies and Planned Actions: For FY 2016 and beyond, some of the actions planned include:

(1) Multimodal Related Actions:

(a) Employee Commuting: The Agency will continue to offer its employees multiple options to improve their commute and reduce GHG emissions. These options include flexible work schedules, transit subsidies, carpool parking spaces, bike racks and shower facilities, and expanded telework.

(b) Open Space Design Project: This project continues as the Agency continues to identify office space in its Washington Headquarters to convert to open design. The conversion scheduled for FY 2016 and FY 2017 will enable the Agency to accommodate 66 new staff members. This project works hand in hand with the Agency’s expanded telework program.

(c) Telework: To enable greater workforce flexibility and enhanced telework capability, the Agency will expand its efforts in FY 2017 to establish a Virtual Desktop Interface (VDI). VDI, when combined with Microsoft’s Direct Access virtual private network (VPN) technology and multi-factor authentication, will give remote users access to a full desktop suite of tools when they make a remote connection to the Agency’s network.

(2) Climate and/or Environmental Related Actions: (Refer to paragraph 4(c)(2) below.)

(3) Infrastructure Preservation:

(a) Antenna Condition Survey: The Agency will continue its assessment of the structural systems that support the medium wave and shortwave antennas at its transmission sites. The primary objective of this assessment is to ascertain where the Agency may have transmission assets that are, or could become vulnerable to major failure if it does not provide the required maintenance and budgetary support.

(b) Facilities Condition Survey Program: The Agency will continue conducting condition surveys of its transmitting sites, as these surveys have provided useful guidance for pinpointing facility needs in the past.

(c) Refurbish Transmission Infrastructure: M&R funding will be used to refurbish the Agency’s transmission infrastructure, including building maintenance, roofing repairs and replacement, water line and septic systems maintenance; heating and cooling equipment maintenance and replacement, power plant maintenance, generator maintenance, building facilities and antenna structures painting, and roads and grounds maintenance.

4. Progress on Administration Priorities:

a. President’s Performance Contracting Challenge: This Agency is not participating in this challenge.

b. Electric and Zero Emission Vehicles: Not Applicable to this Agency. The Agency’s vehicles do not constitute a fleet due to the number of vehicles operated by the Agency and their locations. However, this Agency is open to obtaining ZEV’s but currently, it does not have the infrastructure to support them, and is still determining if ZEV’s, as currently designed, will fit its mission requirements. Once the Agency
determines where and how best to use ZEV’s, this option will be added to our acquisition decision process.

c. Climate Preparedness and Resilience:

(1) As part of this effort, the current Climate Change Adaptation Plan (June 2014) was reviewed. No update was deemed necessary at this time, as the plan continues to reflect the Agency’s situation. A memorandum to this affect is attached to the current version of this plan.

(2) The following climate change related actions are planned actions are planned for the next several years:

(a) An earthen levee will be built to protect the medium wave antenna field at the Marathon (Florida) Transmitting Station from increasingly frequent tidal flooding.

(b) With a number of its transmitting sites situated in close proximity to salt and moisture from the seas and winds, M&R funding will be used for maintenance and repair of antenna structures in these corrosive environments.

(c) To counter the effects posed by the high level of sulfur dioxide emitted into the atmosphere by a nearby smelting plant, M&R funding will be used to install an air filtration system for the Botswana Transmitting Station’s administration and transmitter buildings.

(3) The Agency continues to assess which of its large fixed facilities that provide shortwave and medium wave broadcast capabilities will be needed in the future. While a final decision on most of these facilities has not been made, the Kuwait Transmitting Station will be retained and its facilities expanded to accommodate additional shortwave transmitter. For this reason, any climate change adaption issues identified for this station will need to be addressed.

(4) Climate Resilience: This portion of the E.O. is not applicable to this Agency, as the three elements related to this topic are concerned with domestic programs and policies. The charter of this Agency is focused outside of the United States and its programs and policies do not affect internal regions, states, local communities, and tribes.

Appendices:

a. Fleet Management Plan and VAM Report (attached)
b. Climate Adaptation Plan (attached)
c. Multi-Modal Access Plan (See paragraph 5a(7) above for information on multi-modal activities.)
General:

1. The Agency currently operates 131 motor vehicles overseas, which are located in 15 countries (see chart below). Included in these numbers are four armored vehicles. Since establishing a FY 2011 baseline for motor vehicles, we have reduced the number of overseas motor vehicles by four vehicles.
2. Additional information on our overseas vehicles follows:

a. The armored vehicles were constructed to the current U.S. Department of State Armor Level Specifications at the time of their manufacturer, and were authorized by appropriation.

b. The number of motor vehicles has decreased slightly since FY 2011 and we anticipate decreasing this number further in FY 2016 based on three sites (Dakar, Germany and Philippines) reassessing their motor vehicle requirements.

c. Most of our overseas sites are required to provide home-to-work (HTW) transportation for their Locally Employed Staff (LES). This requirement is reflected in the number of vehicles at these sites capable of moving people.

d. In addition to transporting people, the motor vehicles at our seven transmitting stations are employed in support of buildings and grounds maintenance, electrical maintenance, rigging, and broadcast equipment maintenance. These facilities house large radio transmitters that are used to transmit the signals that carry the Agency's broadcasts. These facilities also include a number of very large antennas. The transmitting stations operate 91% of the Agency's overseas vehicles.

e. The remainder (9%) of the Agency's overseas vehicles support its efforts to gather information in support of its TV and radio programming, or marketing its programming to local and regional broadcasting organizations.

f. The Agency’s overseas motor vehicles were not included in its Vehicle Allocation Methodology (VAM) study.

3. Section 3(g) of Executive Order (EO) 13693, Planning for Federal Sustainability in the Next Decade provides the sustainability goals for “agency fleet and vehicle efficiency and management”. Per the EO, these goals apply if “the agency operates a fleet of at least 20 motor vehicles”. The guidance provided by the White House Council on Environmental Quality on EO 13693 states that a “fleet of at least 20 motor vehicles is given the same applicability as 42 U.S.C. §13212(b)(3)”, which is excerpted below. Based on this definition of a Federal fleet, while the Agency operates 33 motor vehicles domestically, these vehicles do not constitute a Federal fleet due to the geographical locations of the motor vehicles and the types of motor vehicles operated by the Agency.
For purposes of this subsection, the term "Federal fleet" means 20 or more light duty motor vehicles, located in a metropolitan statistical area or consolidated metropolitan statistical area, as established by the Bureau of the Census, with a 1980 population of more than 250,000, that are centrally fueled or capable of being centrally fueled and are owned, operated, leased, or otherwise controlled by or assigned to any Federal executive department, military department, Government corporation, independent establishment, or executive agency, the United States Postal Service, the Congress, the courts of the United States, or the Executive Office of the President. Such term does not include—

(A) motor vehicles held for lease or rental to the general public;
(B) motor vehicles used for motor vehicle manufacturer product evaluations or tests;
(C) law enforcement vehicles;
(D) emergency vehicles;
(E) motor vehicles acquired and used for military purposes that the Secretary of Defense has certified to the Secretary must be exempt for national security reasons; or
(F) nonroad vehicles, including farm and construction vehicles…

4. The responses provided to the questions in paragraphs (A) through (K) below pertain only to the motor vehicles assigned to the Agency’s domestic locations, and the policies and programs that affect these motor vehicles.

(A) Introduction that describes the agency mission, organization, and overview of the role of the fleet in serving agency missions.

(1) Briefly describe your agency’s primary/core mission and how your fleet is configured to support it.
(2) Please describe the organizational structure and geographic dispersion of your fleet.
(3) Describe your agency’s ancillary missions, such as administrative functions, and how your fleet supports them.
(4) Describe how vehicles are primarily used, and how do mission requirements translate into the need for particular vehicle quantities and types.

Response to (A) (1) (2), (3), and (4):

The mission of the Broadcasting Board of Governors (BBG) is to inform, engage and connect people around the world in support of freedom and democracy. The BBG is an independent federal government agency that oversees U.S. civilian international media. It distributes programming in 61 languages to more than 100 countries via radio (satellite, FM, medium wave (AM), and shortwave) terrestrial and satellite TV, the web, live streaming, mobile devices, and social media to a record weekly global audiences of 215 million people.

As shown in following chart, the Agency’s domestic motor vehicles are located in Washington, DC, Florida, North Carolina, and the Commonwealth of Northern Mariana Islands.
Approximately, 88% of these motor vehicles directly support the news gathering and broadcast missions of the Agency’s International Broadcasting Bureau (IBB), Voice of America (VOA), and the Office of Cuba Broadcasting (OCB). These vehicles primarily are used to:

a. Transport correspondents, supporting broadcast technicians and their broadcast equipment to off-site locations to cover events, conduct interviews, or develop stories that are used in the Agency’s TV and radio programming. In order to accommodate personnel and equipment, smaller SUV’s and minivans have proven to be most efficient.

b. Support the radio transmitting sites located near Greenville, NC, and Marathon, FL, and on the islands of Saipan and Tinian in the Commonwealth of Northern Mariana Islands. These vehicles are employed in support of buildings and grounds maintenance, electrical maintenance, rigging, and broadcast equipment maintenance operations. These facilities house large radio transmitters that are used to transmit the signals that carry the Agency’s broadcasts. These facilities also include a number of very large antennas. In order to accomplish the work at the stations, a wide variety of motor vehicles are used.

The remaining motor vehicles, approximately 12%, support of the Agency’s Printing & Mail Room Operations, Facilities Management Branch, and the Office of Security in Washington. The Mail Room’s van is primarily used to pick-up and deliver U.S. mail and diplomatic pouches. The Facilities’ van is primarily used to pick-up and deliver furniture and equipment. Security’s vehicle is used for site visits and conducting background investigations.
(B) Description of vehicle acquisition/replacement strategy deliveries.

1) Describe your agency's vehicle sourcing strategy and decision(s) for purchasing/owning vehicles compared with leasing vehicles through GSA Fleet or commercially. When comparing the cost of owned vehicles to leased vehicles, you should compare all direct and indirect costs projected for the lifecycle of owned vehicles to the total lease costs over an identical lifecycle. Include a rationale for acquiring vehicles from other than the most cost effective source. Note: Information on calculating indirect cost is contained in FMR Bulletin B-38, Indirect Costs of Motor Vehicle Fleet Operations.

2) Describe your agency's plans and schedules for locating AFVs in proximity to AFV fueling stations.

3) Describe your agency's approach to areas where alternative fuels are not available and whether qualifying low greenhouse gas (LGHG) vehicles or ZEVs are being placed in such areas.

4) EO13693 requires agencies to reduce greenhouse gas (GHG) emissions as compared to a 2014 baseline. Describe your agency's plans to meet this goal. If funding is required to comply with this mandate, do you have documentation that it has been requested?

5) EO13693 requires agencies to acquire zero emission vehicles (ZEVs) as an increasing percentage of passenger vehicle acquisitions. Describe your agency's plans to meet this goal. If funding is required to comply with this mandate, do you have documentation that it has been requested? (Note: Do not attach or provide funding documentation unless requested)

Response to (B) (1):

To ensure consistency in the acquisition process, all motor vehicles purchased or leased for use domestically are procured through an Agency contracting officer. The contracting officer is responsible for reviewing the requirement, and procuring a vehicle that complies with the policies established in the Agency’s Broadcasting Administrative Manual (BAM) on motor vehicles. In addition, this BAM makes the General Services Administration (GSA) the primary acquisition source for motor vehicles. This approach helps ensure that vehicles are obtained from cost-effective sources.

The Agency’s approach for future acquisitions is to lease as many of its motor vehicles as possible through the GSA Fleet program, instead of purchasing them or obtaining them through a commercial lease. This approach has already been implemented, as 12 (36.3%) of the Agency’s motor vehicles are leased through the GSA Fleet Program.

While the GSA Fleet Program works well for our vehicles located in Washington, DC and Florida, we are still wrestling with transitioning our major transmitting sites in North Carolina and the Northern Marianas from owning to leasing their vehicles. Due to their location, the wear and tear placed on some of these vehicles based on the types of work conducted at the sites, and the acquisition options (particularly in the Northern Marianas) available at the time of acquisition, purchasing can sometimes be the preferred method over leasing. However, as a final check in the process, any vehicle acquisition by a transmitting station requires Washington’s prior
approval, which involves an analysis of the type of vehicle being requested, the acquisition source, and the costs involved.

Response to (B) (2), (3) and (5):

This Agency does not operate any alternative fuel fueling stations, and due to the small number of motor vehicles at any one of its locations, the Agency is not required to do so. Therefore, the Agency must rely on the commercial marketplace, where availability can vary from location to location, to obtain the required alternative fuels. For this reason, the Agency will initially focus on acquiring suitable vehicles that offer a flex-fuel or hybrid version. In those areas with limited E-85 or B20 fuel sources, preference will be given to hybrid vehicles. If the required vehicle does not come in either a flex-fuel or hybrid version, the Agency will evaluate obtaining a suitable vehicle that has a good low greenhouse gas rating.

Due to the small number of motor vehicles at any one location, the acquisition goals for zero emission vehicles (ZEV) established in EO 13693 are not applicable to this Agency. However, this Agency is open to obtaining ZEV’s but currently, it does not have the infrastructure to support them, and is still determining if ZEV’s, as currently designed, will fit its mission requirements. Once the Agency determines where and how best to use ZEV’s, this option will be added to our acquisition decision process. At this point in time, funding is not an issue.

Response to (B) (4): Due to the small number of motor vehicles at any one location, the EO 13693 goal for reducing greenhouse gas (GHG) emissions is not applicable to this Agency. However, this Agency will work towards achieving a 4% reduction from its FY 2014 baseline by FY 2017. Because of our slow turnover on vehicles, the Agency will focus on reducing the amount of petroleum it uses and increasing the amount of alternative fuel it uses.

(C) Description of Telematics related acquisition strategies.

(1) EO13693 requires agencies to incorporate telematics into the fleet. Describe your agency’s plans to meet this goal.
(2) If funding is required to comply with this mandate, do you have documentation that it has been requested? (Do not attach or provide funding documentation unless requested).
(3) Has the agency acquired the telematics system through GSA or directly from a vendor/company? If so, provide the name of the vendor/company. Did the costs of telematics systems acquired directly from the vendor/company exceed those provided through GSA? If so, please provide rationale for the decision.
(4) Describe the type of telematics technology installed (satellite, cellular or radio frequency identification (RFID)).
(5) What type of telematics features are installed in your vehicles? Check all that apply from the list below: (Note – When the form is finalized, there will be check boxes or drop down box included on the template)

**GPS tracking** - Fleet managers can monitor the location of their vehicles in real-time by logging on to a user accessible website.
**Engine diagnostics** - Fleet managers can have engine diagnostics reports delivered to their email showing the current condition of the vehicle, odometer readings, idle time, emissions information and speed data.

**Vehicle monitoring and driver identification** - Fleet managers can track a driver of every vehicle via the usage of key fobs for the drivers or in-vehicle devices and can track who is, or was, driving any given vehicle at any particular time, as well as limit who can operate which vehicles.

**In-vehicle recording** – This solution uses inward and outward facing cameras to record the driver’s behavior as well as the vehicle’s surroundings. The device saves the footage from several seconds before and after a sudden movement occurs, such as sudden stop or hard turn.

**Instant driver feedback** – This system provides an immediate, private, in-cabin indication via light activation within the driver’s line of sight. The feedback device is designed to track and report harsh breaking, sudden acceleration, cornering/high speed turns, unsafe lane changes and speeding (with a pre-determined speeding threshold).

**Other** – Describe other service

**Fuel Usage** - Information on gallons of fuel and subsequent MPG calculations.

(6) Describe the obstacles encountered, lessons learned, and any experiences or other information that may benefit other agencies. Consideration should be given to the impact that aftermarket telematics may have on vehicle warranties.

Response to (C) (1): Due to the small number of motor vehicles at any one location, the telematics requirement established in EO 13693 is not applicable to this Agency. However, this Agency will consider telematics as it acquires new passenger or light-duty vehicles in the future. Also, we are hoping that this technology will soon be included on the vehicles leased through the GSA Fleet Program, as this approach would certainly facilitate compliance with this requirement.

Response to (C) (2): Funding is not an issue at this time.

Response to (C) (3): This agency has not purchased any telematics systems.

Response to (C) (4) and (5): There are no telematics installed in any of the Agency’s vehicles.

Response to (C) (6): Not applicable at this time.

**(D) Description of efforts to control fleet size and cost.**

(1) Provide an explanation for any measurable change in your agency’s fleet size, composition, and/or cost or if you are not meeting optimal fleet goals (based on agency VAM study results).

(2) Describe the factors that hinder attainment of your optimal fleet (e.g., budgetary, other resource issues, mission changes, etc.).

(3) Discuss any trends toward larger, less fuel-efficient vehicles and the justifications for such moves.
(4) Are you aware of and do you consider alternatives (short term rental, pooling, public transportation, etc.) to adding a vehicle to the agency’s fleet?

(5) Discuss the basis used for your future cost projections (published inflation estimates, historical trends, flat across-the-board percentage increases, mission changes, etc.)

Response to (D) (1):

This Agency has met its VAM goal established in FY 2012. Since the VAM was initially created, the types of motor vehicles used at the domestic locations have remained relatively stable, while the total number of vehicles on hand has decreased. Currently, the Agency has 33 motor vehicles on hand. A target goal of 38 motor vehicles was established in the original VAM but over the years, the Agency was able to remove additional motor vehicles from its inventory, without affecting its mission.

Operating costs continue to remain fairly constant. Between FY 2005 and FY 2015, the cost (fuel & direct and indirect maintenance) to operate the Agency’s domestic vehicles averaged out to $2.09 per mile. The operating costs since FY 2011 averaged out to $2.11 per mile.

Response to (D) (2): Not applicable as the Agency met its optimal size.

Response to (D) (3): Currently, the Agency is not planning on acquiring any larger or less fuel efficient vehicles.

Response to (D) (4): The Agency is not planning on increasing the number of motor vehicles at any of its domestic locations. If circumstances change, other methods of providing the needed transportation would be considered as part of the process in determining if an additional motor vehicle needs to be added.

Response to (D) (5): The Agency uses a flat across-the-board percentage increase to report future cost projections.

(E) Description of Vehicle Assignments and Vehicle Sharing.

(1) Describe how vehicles are assigned at your agency (i.e., individuals, offices, job classifications, motor pools).
(2) Describe your agency’s efforts to reduce vehicles assigned to a single person wherever possible.
(3) Describe pooling, car sharing, and shuttle bus consolidation initiatives as well as efforts to share vehicles internally or with other Federal activities.
(4) Describe how home-to-work (HTW) vehicles are justified, assigned, and reported, as well as what steps are taken by your agency to limit HTW use.
(5) Does your agency document/monitor the additional cost of HTW use of Federal vehicles? If so, please describe how.
Response to (E) (1): Vehicles are assigned to a particular office or operating site.

Response to (E) (2): Not Applicable. This Agency does not assign motor vehicles to a single person.

Response to (E) (3): Not applicable. The Agency does not operate shuttle buses, and does not maintain motor vehicles just to provide "shuttle bus-type" transportation.

Response to (E) (4) and (5): Not applicable. The Agency does not provide home-to-work (HTW) transportation at its domestic location.

(F) Evidence of Vehicle Allocation Methodology (VAM) Planning.

Provide information on the methods used to determine your agency’s VAM targets/optimal inventory. (Recommendation #2 from GAO report: GAO-13-659. See FMR Bulletin B-30 for guidance on conducting a VAM study and developing VAM targets).

(1) What is the date of your agency’s most recent VAM study? Please describe the results (Add/Reduce/Change vehicle types, sizes, etc.). Have all bureaus been studied?
(2) From your most recent VAM study, please describe/provide the specific utilization criteria (miles, hours, vehicle age, or other measures) used to determine whether to retain or dispose of a vehicle? If different criteria were used in different bureaus or program areas, provide the criteria for each.
(3) From your most recent VAM study, what were the questions used to conduct the VAM survey (see FMR Bulletin B-30(6)(C)) (if lengthy, provide as an attachment)? If different questions were used by different bureaus or program areas, provide the questions for each. If a VAM survey was not conducted, please describe the methods used to apply utilization criteria to each vehicle in your agency’s fleet and collect subjective information about each vehicle that potentially could provide valuable insights/explanations into the objective criteria.

Response (F) (1): The VAM was prepared in FY 2012 and the baseline was based on the Agency’s vehicles on hand at the end of FY 2011. At the time the VAM was created, there were 43 motor vehicles located at our domestic sites. Based on known attritions, it was determined that the Agency’s optimal size should be 38 motor vehicles, with no change to the types/mix of motor vehicles being used by the Agency at its domestic sites.

Response (F) (2) and (3): The Agency only became aware of the VAM requirement shortly before it was due to be submitted. In order to ensure that the required documentation was prepared and submitted on time, the formal VAM process could not be followed. For this reason, no questions were developed in support of preparing the Agency’s current VAM and no utilization criteria were applied. Instead, the Agency determined its optimal number of motor vehicles using the number and types of motor vehicles on hand at the end of FY 2011, less known disposals with no replacements anticipated. The reasoning behind this approach was that this motor vehicle mix had remained consistent over a number of years, and had proven
adequate in meeting the Agency’s mission. This approach was used for all the Agency’s domestic vehicles.

In anticipation of conducting a new VAM in FY 2017, the questions below are being considered for use in developing the FY 2017 VAM. These questions will be used by all the Agency’s elements that are subject to the VAM.

1. What are the operating terrain and climate like?
2. What are the driving conditions that the vehicle will encounter during normal operations?
3. What tasks do you accomplish with this vehicle? Describe how these tasks support the Agency’s mission.
4. Considering all the vehicles available at your location, if you did not have this vehicle, what critical task or tasks could not be accomplished? Are any of these tasks mission critical?
5. Does the vehicle need special equipment (aftermarket equipment not standard to commercial vehicles and trucks) to accomplish its tasks?
6. What is the current age and condition of the vehicle?
7. How many hours or days a month is the vehicle not available due to maintenance issues?
8. How many miles is the vehicle estimated to travel annually?
9. How many times is the vehicle used on average during the month?
10. What are the average number of miles traveled per trip/use?
11. What are the average number of hours the vehicle is in use per trip/use?
12. How many people will be transported per trip/use on a regular basis?
13. How much and what type of cargo will the vehicle haul on a regular basis?
14. Is there access to alternative fuel within 5 miles or 15 minutes of the vehicle’s garaged location, and if so, where is it located and what type of alternative fuel is available?
15. Can the work be done using alternatives to owning or leasing a vehicle such as shuttle bus services, motor pool vehicles, sharing vehicles with other offices/agencies, public transportation, or short term rentals when needed, etc.?

(G) Description of the agency-wide Vehicle Management Information System (See FMR 102-34.340)

Federal agencies are to begin collecting asset level data (ALD) beginning October 1, 2016 in order to be able to report ALD in the October-December 2017 FAST data call. To comply, your agency will need a management information system (MIS) capable of reporting inventory, cost, usage, and other information on a “per vehicle” basis.

(1) Does your agency have a vehicle management information system (MIS) at the Department or Agency level that identifies and collects accurate inventory, cost, and use data that cover the complete lifecycle of each motor vehicle (acquisition, operation, maintenance, and disposal), as well as provides the information necessary to satisfy both internal and external reporting requirements?
(2) Your agency was provided a draft list of 70 ALD data elements. How many of the 70 data elements is your current system able to report on a “per vehicle” basis right now?
Describe your agency’s plan for reporting all required ALD elements. What is the timeline?

If your agency does not currently have a system capable of reporting ALD, describe the steps (documented) that are being taken or have been taken to comply with Executive Orders, regulations, and laws that require such a system.

If your agency currently uses telematics systems, does your MIS capture and report all of the data from those devices?

Response to (G) (1), (3) and (4):

The Agency has always collected vehicle information on a “per vehicle” basis. Over the past three years, the Agency has been developing a vehicle management information system (VMIS) to capture vehicle information on a “per vehicle” basis. For the past two years, this system has been tested at our Washington Headquarters, where information received from the field was loaded into the system and used to successfully prepare the last two annual Federal Automotive Statistical Tool (FAST) vehicle reports. The system is capable of capturing inventory, cost and use data throughout a vehicle’s lifecycle, and it supports the Agency’s reporting requirements.

Currently, the system is being modified to add additional data fields required by GSA and the FAST reporting system. Once this effort is completed and the system is tested and approved, a decision will be made on whether or not to expand the use of the system beyond the Washington Headquarters by fielding the system for use at the Agency’s field locations. At this time, we anticipate having all the 70 ALD fields incorporated into our VMIS and tested prior to the October 1, 2016 data collection start date.

Response to (G) (2): Currently, the Agency’s VMIS has approximately 30 of the 70 ALD elements that can report on a “per vehicle” basis.

Response to (G) (5): Not applicable. The Agency currently does not use telematics.

(H) Justification for restricted vehicles.

(1) If your agency uses vehicles larger than class III (midsize), is the justification for each one documented?

(2) Does your agency use the law enforcement (LE) vehicle classification system described in GSA Bulletin FMR B-33? If not, why not?

(3) If your agency reports limousines in its inventory, do they comply with the definition in GSA Bulletin FMR B-29?

(4) For armored vehicles, do you use the ballistic resistance classification system of National Institute of Justice (NIJ) Standard 0108.01, and restrict armor to the defined types?

(5) Are armored vehicles authorized by appropriation?

Response to (H) (1): Not applicable. The Agency’s sedans are midsize.

Response to (H) (2): Not applicable. There are no law enforcement vehicles in the Agency.
Response to (H) (3): Not applicable. The Agency does not operate an executive fleet.

Response to (H) (4): There are no armored vehicles assigned to the Agency’s domestic locations.

Response to (H) (5): Not applicable. There are no armored vehicles assigned to the Agency’s domestic locations.

(I) Impediments to optimal fleet management.

(1) Please describe the obstacles your agency faces in optimizing its fleet.
(2) Please describe the ways in which your agency finds it hard to make the fleet what it should be, operating at maximum efficiency.
(3) If additional resources are needed, (such as to fund management information system implementation or upgrades, or to acquire ZEVs, or LGHG vehicles, or install alternative fuel infrastructure) have they been documented and requested? Do you have a copy of this documentation? (Do not attach or furnish unless requested).
(4) Describe what specific laws, Executive Orders, GSA’s government-wide regulations or internal agency regulations, budget issues, or organizational obstacles you feel constrain your ability to manage your fleet. Be specific and include examples. If you have a solution, describe it and indicate whether we can share the solution with other agencies as a potential best practice.

Response to (I) (1): Not applicable, as the Agency has reached and exceeded its optimal vehicle inventory. Based on the FY 2011 baseline, it was anticipated that the number of motor vehicles assigned to the Agency’s domestic elements would be reduced from 43 to 38. However, since the VAM was developed, additional motor vehicles were disposed of without replacement. At this point, it appears that the Agency’s optimal number of domestic motor vehicles will be closer to 32-33 motor vehicles versus 38.

Response to (I) (2): The Agency operates a small number of vehicles and does not turnover its inventory on a regular basis. This is especially true of the motor vehicles at the transmitting stations, where we tend to retain vehicles for many, many years. In addition, the Agency rents most of its office space from GSA and its transmitting stations are located in more isolated areas. For this reason, we do not always have the infrastructure available to us that is needed to achieve many of the program’s requirements. So even though we try to keep within the spirit of this effort, it is sometimes hard for us to meet the goals (alternative fuel use, ZEV’s, etc.) established for the program.

Response to (I) (3) and (4): Currently, we do not have specific issues with funding, or laws and regulations.
(J) Anomalies and possible errors.

(1) Explain any real or apparent problems with agency data reported in FAST.
(2) Discuss any data fields highlighted by FAST as possible errors that you chose to override rather than correct. Examples would be extremely high annual operating costs or an abnormal change in inventory that FAST considers outside the normal range, or erroneous data in prior years causing an apparent discrepancy in the current year.
(3) Explain any unresolved flagged, highlighted, or unusual-appearing data within FAST.

Response to (J) (1), (2), and (3): Only one domestic location was flagged in FAST. The vehicle was incorrectly recorded as a gasoline dedicated vehicle, as it is a flex-fuel vehicle that used E-85 fuel this year. This situation also accounts for our AFV inventory totals showing us with one less AFV this year.

(K) Summary and contact information.

(1) Who should be contacted with questions about this agency fleet plan? (Provide the name and contact information for the agency headquarters fleet manager and the person preparing this report if different)
(2) Indicate whether the budget officer participated in the VAM and A-11 processes. (Provide the name and contact information for the budget office reviewing official).
(3) Indicate whether the Chief Sustainability Officer participated in the VAM, vehicle planning, and vehicle approval processes. (Provide the name and contact information for the CSO reviewing official).

Response to (K) (1): The point of contact for this document is David Evans, Network Support Branch (T/EOS/N), devans@bbg.gov, 202-382-7381.

Response to (K) (2): The Office of the Chief Financial Officer’s reviewing official was Frank Filipkowski, (CFO/B), ffilipkowski@bbg.gov, 202-203-4422.

Response to (K) (3): This document also was reviewed by Mark Filipek, Chief Sustainability Officer, filipek@bbg.gov, 202-382-7359.
June 16, 2016

SUBJECT: Climate Change Adaptation Update for FY 2016

As part of this Agency’s efforts to prepare its FY 2016 Strategic Sustainability Performance Plan, the Agency’s current Climate Change Adaptation Plan was reviewed. While this plan was created in June 2014, it continues to reflect the Agency’s current situation and future direction. Based on this review, it was determined that a full revision of the plan was not required at this time.

While the plan fairly represents the Agency’s current position, the following information is provided as an update to the plan:

1. Since this plan was developed, the Agency’s weekly global audiences have grown from 206 million to more than 215 million people.

2. The Agency has changed the title Senior Sustainability Officer to Chief Sustainability Officer.

3. The Agency’s points of contact for climate change adaptation issues have changed. The new points of contact are:
   a. Richard Hoffman, Network Support Branch (T/EOS/N), rhoffman@bbg.gov, 202-382-7362.
   b. Sheilla Salicrup, Chief, T/EOS/N, ssalicrup@bbg.gov, 202-382-7339.

4. The Agency continues to face a number of climate change and environmental related issues, which include:
   a. Six transmitting sites are particularly vulnerable to corrosion because of their proximity to salt and moisture from the seas and winds. The antenna systems at all these sites are particularly affected.
   b. The Botswana Transmitting Station is located near a smelting plant, and the pollution from the plant creates a corrosive environment. The antenna systems at this site are particularly affected. In addition to having an environmental impact on the equipment, the smelting plant emits a high level of sulfur dioxide into the atmosphere.
   c. The Marathon (Florida) Transmitting Station is increasingly experiencing frequent tidal flooding in its medium wave antenna field.

5. The following climate change and environmental related actions are planned actions are planned for the next several years:
   a. For the transmitting sites operating in corrosive environments, maintenance & repair (M&R) funding will be used to correct deficiencies and maintain the antenna structures.
b. To counter the effects posed by the high level of sulfur dioxide emitted into the atmosphere by a nearby smelting plant, M&R funding will be used to install an air filtration system for the Botswana Transmitting Station's administration and transmitter buildings.

c. An earthen levee will be built to protect the medium wave antenna field at the Marathon (Florida) Transmitting Station from increasingly frequent tidal flooding.

6. The Agency continues to assess which of its large fixed facilities that provide shortwave and medium wave broadcast capabilities will be needed in the future. While a final decision on most of these facilities has not been made, the Kuwait Transmitting Station will be retained and its facilities expanded to accommodate additional shortwave transmitters. For this reason, any climate change adaption issues identified for this station will need to be addressed.

Sincerely,

[Signature]

Mark Filipek
Director, Operations & Stations Division
Office of Technology, Services and Innovation
Chief Sustainability Officer
Broadcasting Board of Governors

FY 2014 Climate Change Adaptation Plan

June 2014

Prepared By: Clement Heincer, Network Support Branch (T/EOS/N), cheincer@bbg.gov, 202-382-7363

Reviewed By: Mark Filipek, Director, Operations & Stations Division (T/EOS), Senior Sustainability Officer, mfilipek@bbg.gov, 202-382-7359
SUBJECT: Climate Change Adaptation Policy Statement

The Broadcasting Board of Governors (BBG), in accordance with the U.S. International Broadcasting Act of 1994 (as amended), oversees U.S. civilian international media. The BBG distributes programming in 61 languages to more than 100 countries via radio (shortwave, medium wave (AM), FM and satellite), terrestrial and satellite TV, the web, live streaming, mobile devices, and social media to unprecedented weekly global audiences of more than 206 million people in 2014.

In accomplishing this mission, the BBG oversees the International Broadcasting Bureau (IBB), which manages program distribution and marketing for the Agency, and provides administrative support for its broadcasting elements, the Voice of America and Office of Cuba Broadcasting. In addition, through its Office of Technology, Services and Innovation (TSI), IBB delivers program content for all BBG networks and provides information technology support to many offices throughout the Agency. In this effort, TSI manages more than 90 transmitting sites worldwide that deliver shortwave, medium wave, FM, and TV broadcasts. It also leases broadcast time at 17 transmitting sites in 12 countries.

The purpose of this policy statement is to document the BBG's commitment to climate change adaptation planning to address the challenges posed by climate change to the Agency's mission, programs, and operations. Through adaptation planning, the Agency will identify how climate change is likely to impact our ability to achieve our mission, operate our facilities, and meet our policy and program objectives. Through adaptation planning, the Agency will develop, prioritize, implement, and evaluate actions to moderate climate change risks and exploit any new opportunities that climate change may bring.

The BBG's FY 2014 Climate Change Adaptation Plan addresses the Agency's operating environment, and identifies the primary climate change issues faced by it. The Plan also identifies the potential impacts climate change will have on the Agency's personnel and infrastructure, and discusses the Agency's near-term and long-term approaches for ensuring that it is able to meet its operational requirements despite changes to the climate. The Plan is a living document and will be updated as necessary to address the impact our changing environment is having on the Agency's operations.

Sincerely,

[Signature]

André V. Mendes
Director of Global Operations
Broadcasting Board of Governors
SUBJECT: Broadcasting Board of Governors’ Climate Change Adaptation Plan for FY 2014

1. Agency Overview

1.1 The Broadcasting Board of Governors (BBG), in accordance with the U.S. International Broadcasting Act of 1994 (as amended), oversees U.S. civilian international media. The BBG distributes programming in 61 languages to more than 100 countries via radio (shortwave, medium wave (AM), FM and satellite), terrestrial and satellite TV, the web, live streaming, mobile devices, and social media to unprecedented weekly global audiences of more than 206 million people in 2014.

1.2 The BBG consists of Federal and non-Federal elements. The Federal element includes the International Broadcasting Bureau (IBB) with its broadcasting organizations, the Voice of America (VOA) and the Office of Cuba Broadcasting (OCB). The IBB manages program distribution and marketing for the Agency and provides administrative support for VOA and OCB.

1.3 Within the IBB, the Office of Technology, Services and Innovation (TSI) manages a broad range of technical and infrastructure functions, including delivering program content for all BBG networks and providing information technology support to many offices throughout the Agency. TSI strives to distribute BBG content in the most cost-effective and efficient manner possible. It manages more than 90 transmitting sites worldwide that deliver shortwave, medium wave, FM, and TV broadcasts. TSI also leases broadcast time at 17 transmitting sites in 12 countries. TSI is also responsible for coordinating BBG’s strategic sustainability planning effort and its climate change adaptation planning effort.

1.4 Within TSI, the Director, Operations & Stations Division (T/EOS) is responsible for the day to day operations of the Agency’s Transmitting Station Network. A number of these transmitting sites are large, energy-intensive facilities, and are the Agency’s largest users of electricity. For this reason, the T/EOS Director provides overall guidance and direction for the Agency’s energy management program and serves as the Agency’s Senior Sustainability Officer (SSO). In addition, the T/EOS Director is responsible for providing overall guidance and direction for the Agency’s climate change program. The primary focus of this program is ensuring that the Agency is able to meet its operational requirements despite the changes in climate.

1.5 The BBG is committed to climate change adaptation planning. This process will enable the Agency to identify early on the actions that should be undertaken for the orderly upgrade of its broadcast facilities, so that they can continue to operate at their highest level in the operating environment envisioned for the future. Through adaptation planning, the Agency will identify the potential impacts a changing climate will have on its mission, operations, and programs. Through adaptation planning, the Agency will develop, prioritize, implement, and evaluate actions to moderate climate change risks and exploit any new opportunities that climate change may bring.
2. Planning for Climate Change Related Risk

2.1 Operating Environment:

2.1.1 Domestically, the Agency leases office and broadcasting studio space through the General Services Administration (GSA) in Washington, DC, Miami, FL, New York, NY, and Los Angeles, CA. In addition, the Agency occupies two USG-owned transmitting sites in North Carolina and Florida, and leases two transmitting sites in the Commonwealth of Northern Mariana Islands.

2.1.2 By far, the large majority of the Agency’s facilities are located overseas. These facilities include seven transmitting stations, which house a number of large shortwave (SW) and medium wave (MW) transmitters, and are the Agency’s primary transmitting facilities. In addition, the Agency operates or supports a large number of smaller sites primarily operating one, in most cases, FM transmitter. These smaller sites are located in many countries throughout the world.

2.2 Planning Element i: Identification and assessment of climate change related impacts on and risks to the Agency’s ability to accomplish its missions, operations, and programs:

2.2.1 Based on its experiences in supporting this large network, the Agency has identified four primary climate change issues that it will have to address. These issues are:

- The impact on employee health as the working and living conditions change.
- The impact on station operations to include the impact on equipment, facilities, infrastructure, and the Agency’s ability to support them with sufficient energy, water, supplies, and materials.
- The impact of rising sea levels, as a number of the sites are located near the sea.
- The impact of more frequent and stronger heat waves, and more frequent high-intensity rain and snow storms. A number of these facilities contain very tall antenna systems that are vulnerable in extremely high wind situations. In addition, these facilities conduct satellite uplink and downlink operations that can be affected by “rain fade”, which is caused by rain, snow or ice storms.

2.2.2 The following areas (issues) represent potential impacts that will need to be addressed in order for the Agency to adapt to the predicted effects of climate change. Under current operating conditions, the effects of climate change are not having a significant impact on the mission of the Agency’s transmitting stations; however, the anticipated changes that will occur in the future could pose a serious threat to one or more of the transmitting sites.

2.2.2.1 Facilities and Infrastructure:

- Changing environmental conditions (heat waves, strong storms, flooding, etc.) may tax the Network’s ability to maintain equipment and facilities, as the modification of existing infrastructure or the creation of new infrastructure may be required in order to continue to provide support to one or more of the transmitting sites.
- The logistical support systems for these sites may have to be modified in order to adapt to the changing operating conditions.
• The continued use of some of the current transmitting locations may become unviable due to flooding, the loss of all or portions of the current support infrastructure, or the inability to provide adequate logistical support.
• Selecting viable sites for any future transmitting locations may become more difficult due to infrastructure and logistical hurdles.
• The availability of usable potable and non-potable water may become a problem due to potential drought conditions, or infiltration of sea water.
• Obtaining the types of broadcast equipment needed to support operations may become an issue as deteriorating air quality and other changing environmental factors may affect how the equipment operates. In some cases, this equipment may need to be tailored by location.
• Finding reliable and affordable sources of electricity will continue to be a problem, which eventually could affect a site’s ability to obtain sufficient stable electricity to meet its mission requirements.
• Fire is always a concern, especially in the antenna fields, and this concern will increase if the number of wild fires increases as the climate becomes hotter and drier.

2.2.2.2 Personnel:

• Deteriorating air quality may affect how the employees accomplish their work.
• Increases in the frequency of illnesses due to changes in average temperature, as well as, exposure to "new" illnesses may increase employee absences.
• Work-related injuries may increase as the work environment changes.

2.3 Planning Element ii: Description of programs, policies, and plans the Agency has already put in place, as well as additional actions the Agency will take, to manage climate risks in the near term and build resilience in the short and long term:

2.3.1 The following bullets identify potential adaptations the Agency can explore as it refines its climate change adaptation plan:

• Need to address replacing fixed facilities with other means of broadcasting where practical.
• Need to assess the Agency’s ability or need to continue to support each of its transmitting locations, and if continued support is needed, need to determine ways to continue to provide this support.
• Need to identify a supportable way to provide backup power if commercial sources of electricity prove unreliable.
• Need to explore employing new or modified operating procedures and broadcast equipment configurations to maximize broadcast signal quality.
• Need to explore adjusting on-site work routines as anticipated environmental changes occur. Things to address would include:
  o Upgrading facilities to alleviate unhealthy work conditions brought on by climate change.
  o Working with local communities to ensure that health care facilities continue to address the evolving health-related issues associated with climate change.
  o Need to adjust logistical support methods to ensure that the local infrastructure remains capable of meeting the station's support requirements.
• Need to identify ways to reduce the impact on the facilities and support infrastructure of wild
dfires.
• Need to determine actions that can be taken to ensure that adequate supplies of water are
available to sustain operations. This future planning also should address the potential for
operating with a lack of year-round source of water, and operating with low quality water for
irrigation and other applications when potable water is not required.
• Need to identify ways to properly handle increased storm water runoff to include determining if
improvements need to be made to drainage systems.
• Need to identify ways to protect large antenna systems and satellite dishes from damage caused
by high winds, as the loss of these assets can result in lost broadcasts.

2.3.2 Near-Term Climate Change Adaptation Process:

2.3.2.1 As an initial step in the climate change adaptation process, an in-house study was conducted to
determine the impact, if any; climate change would have on the broadcast signal. As suspected, it was
determined that it would not have any significant impact.

2.3.2.2 The primary focus of the near-term process is to maintain the Agency’s large transmitting
stations in operating order until a final decision is made on each facility’s future. Maintaining these
facilities, with a number of them located in remote areas, is challenging under normal circumstances,
and will become more difficult as the anticipated effects of climate change become more and more
apparent.

2.3.2.3 During this timeframe, any facility upgrade project undertaken by a transmitting station is
incorporated into the Agency’s maintenance & repair (M&R) program and funded in the FY requested, if
sufficient funding is available. Funding for M&R projects at the transmitting stations has been limited for
a number of years, and it appears that it will remain that way for some time. To compound matters,
since FY 2013, this effort has been severely hampered due to extensive storm damage sustained by two
of our sites. The winds from these storms caused significant damage, with the antenna systems suffering
the worst. Funding for these repairs has been estimated to be approximately $3.0 million. Because of
this situation, only high priority M&R actions are being undertaken elsewhere.

2.3.2.4 Currently, M&R projects that affect both climate change adaptation and strategic sustainability
involve seeking ways to reduce energy usage at a site. These large stations are high-intensity energy
facilities that do not fit the standard building energy profile for heating, ventilating, air conditioning
(HVAC) systems, and electric loads used for normal buildings. Reducing the amount of energy needed to
operate a site will enhance the site’s ability to maintain normal operations as the operating environment
changes due to climate change. The following are two examples of actions in this area:

• Beginning in FY 2010, the Agency installed energy-saving technology on many transmitters in
the global network. The purpose of this project was to reduce the amount of electricity used by
the large shortwave transmitters at these broadcast facilities. Since initiating amplitude
modulation companding (AMC) on these transmitters, the stations have seen a significant
reduction in their energy use each year, with no impact on the quality of the broadcasts.

• In March 2013, one transmitting station received permission to evaluate the impact of “black
heating” a transmitter’s filaments when the transmitter was off the air instead of operating the
transmitter at full standby power. The purpose of the evaluation was to identify possible energy savings and determine the effect, if any, “black heat” had on the operation of the transmitter. The station has been testing this mode on one of its transmitters and estimates an annual power reduction of 127,400kWh. Based on the success of the station’s “black heat” tests, in December 2013, the station was authorized to implement “black heat” on its other six shortwave transmitters.

2.3.3 Long-Term Climate Change Adaptation Process:

2.3.3.1 Process Summary:

- **Action Description**: Realign the Agency’s distribution methods to deliver program content in the manner consumers now want to access it.
- **Action Goal**: To restructure the Agency’s shortwave distribution network so that the Agency retains adequate shortwave service to high priority target areas.
- **Agency Lead**: Office of Technology, Services, and Innovation
- **Risk or Opportunity**: In planning for and carrying out this restructuring, the Agency will take this opportunity to identify the large fixed facilities that it will need in the future to meet its mission requirements. Once these key facilities are identified, Agency personnel can then focus on improving each facility’s ability to operate in a changing environment.
- **Scale**: Agency level
- **Timeframe**: The project will begin in FY 2014 with an end date to be determined.
- **Implementation Method**: The decisions will be based on the target audiences to be reached, the best means to reach the target audiences, and the fixed facilities that best support this effort.
- **Performance**: The metrics to be used to measure performance will be determined as part of this action.
- **Inter-governmental Coordination**: None at this time.
- **Resource Implications**: None at this time.
- **Challenges/Further Considerations**: None at this time.
- **Highlights of Accomplishments to Date**: The project is still in the initial stages.

2.3.3.2 Process Discussion:

2.3.3.2.1 The Agency’s long-term plans for adapting to anticipated climate changes will take some time to fully develop because the Agency must first come to terms with how it wants to realign its program delivery structure, as identified in the Agency’s strategic plan, to “reach audiences on their preferred media platforms.” This realignment recognizes that “the Agency’s distribution methods and means have not strategically tracked the shifts in media use. We must therefore align how we deliver our content with how consumers now access it.” In general terms, the Agency plans on reducing the number of large fixed facilities it maintains by replacing them through advances in technology.

2.3.3.2.2 The Agency’s major transmitting facilities primarily broadcast the Agency’s programs using large shortwave transmitters. This technology, while critical to the Agency’s success in the past, no longer meets the challenges of broadcasting in the 21st Century. In the future, it is anticipated that the Agency will need to significantly reduce its heavy use of its shortwave platform, and move to more audience preferred platforms such as, satellite and Internet radio, mobile phone technologies, and
Internet-based social media. The Agency’s proposed actions as expressed in the FY 2014 Budget “will not eliminate shortwave; rather, it will restructure and evolve the BBG shortwave distribution network to leverage the use of stations with the lowest operating costs and maintain adequate shortwave service to high priority target areas where shortwave transmissions will continue to be important to satisfy Agency mission requirements.”

2.3.3.2.3 In light of the above, the Agency plans on making wholesale changes in how it distributes its content. In the future, it will use shortwave to broadcast to the half-dozen or so countries where it makes sense to do so, but the Agency “will sharply draw down our shortwave capacity to reallocate the resources to the new platforms our audiences are using.” In support of this effort, the Agency plans on making “pragmatic, research-based decisions on which shortwave and medium wave radio transmissions and facilities to continue, and which to draw down or close.” The resources saved through this effort will be used to support the more effective broadcast platforms.

2.3.3.2.4 In this fluid environment, it will take some time to determine which transmitting facilities will remain operational for the foreseeable future. Once this information becomes available, the Agency will be able to focus on improving the infrastructure of those facilities, if required, with enhancements that are appropriate for climate change adaptation.

2.4 Planning Element iii: A description of how any climate change related risk ...that is deemed so significant that it impairs an Agency’s statutory mission or operation will be addressed, including through the Agency’s existing reporting requirements: At this point in time, the Agency has not identified a climate change related risk so significant that it would impair the Agency from delivering its programming to its intended audiences, as advances in technology have provided the Agency with multiple platforms that can be used to deliver this programming.

2.5 Planning Element iv: A description of how the Agency will consider the need to improve climate adaptation and resilience, including the costs and benefits of such improvement, with respect to Agency suppliers, supply chain, real property investments, and capital equipment purchases such as updating Agency policies for leasing, building upgrades, relocation of existing facilities and equipment, and construction of new facilities:

2.5.1 The Agency’s domestic profile is very small. Most of its office and broadcasting studio space is located in large urban centers, and these spaces are leased through GSA. Our facilities personnel work closely with GSA on space upgrades and building infrastructure requirements. We use the latest technology and practices available, within our budgetary restraints, to support our broadcasting efforts, IT systems, and building upgrades. The local infrastructure (streets, roads, buses, subways, etc.) that surrounds these work areas is controlled by Federal or local governments.

2.5.2 The Agency occupies two USG-owned transmitting sites that are located within the United States. As mentioned in paragraph 2.3.3.2.3, these facilities will be evaluated along with the other large transmitting facilities to determine their future role within the Agency.

2.6 Planning Element V: A description of how the Agency will contribute to coordinated interagency efforts to support climate preparedness and resilience at all levels of government, including collaborative work across agencies’ regional offices and hubs, and through coordinated development of information, data, and tools, consistent with... this order: This Agency is open to cooperating with other
agencies in the downtown Washington, DC area on appropriate climate change adaptation initiatives. However, the Agency is not staffed with any experts in the field of climate change adaptation.

3. Modernizing Federal Programs and Policies to Support Climate Resilient Investment: This portion of the template for the climate change adaptation plan is not applicable to this Agency, as the three elements related to this topic are concerned with domestic programs and policies. The charter of this Agency is focused outside of the United States and its programs and policies do not affect internal regions, states, local communities, and tribes.

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