

Broadcasting Board of Governors

2015 Strategic Sustainability Performance Plan

June 22, 2015

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Policy Statement

BROADCASTING BOARD OF GOVERNORS
INTERNATIONAL BROADCASTING BUREAU

June 22, 2015

SUBJECT: Policy and Strategy for Implementing 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 executive orders (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 Filipek
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 focus on:

- Continuing to reduce broadcast programming hours, which should result in additional electricity savings.
- Continuing to provide a robust telework program, which should have a positive impact on employee commuting.
- Continuing to transition from old methods of program distribution to new ones, which has implications for strategic sustainability and climate change adaptation.
- Continuing to maintain our aging infrastructure, with emphasis on performing corrective and preventive maintenance on our large antenna systems, during this period of transition. These actions also have implications for strategic sustainability and climate change.

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.

- **Electronic Stewardship:** Requirements in this area involve TSI's *Information Technology Directorate (TI)* and *Network Support Branch (T/EOS/N)*, as well as, the *Office of Contracts (CON)*.

- Federal Employee Business Travel: Requirements in this area involve the *Office of the Chief Financial Officer (CFO)*.
- Federal Employee Commuting: Requirements in this area involve the *Office of Human Resources (OHR)*.
- Sustainable Acquisition: Requirements in this area involve *CON*.

3. Performance Review:

a. **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. These documents do not address "strategic sustainability" directly; however, some of the actions addressed in these documents will have a direct impact on the Agency's future "strategic sustainability" profile. While these documents talk in terms of anticipated efficiencies and costs savings, it also is anticipated that a number of these actions will improve the Agency's overall energy profile.

b. **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.

c. **Successes:** 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 2014 and FY 2015 (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 FY2014, the Agency reduced its Total (Target, Non-Target, and International) Scope 1&2 GHG emissions by 6.0% when compared to FY 2013, and by 35.1% when compared to the FY 2008 baseline. The Agency also reduced its Total (Target, Non-Target, and International) Scope 3 GHG emissions by 6.8% when compared to FY 2013, and by 26.7% when compared to the FY 2008 baseline. The Total Scope 1, 2, and 3 GHG emissions combined was reduced by 6.1% when compared to FY 2013 and by 34.1% when compared to the FY 2008 baseline.

(2) Lighting Projects: One domestic and six overseas transmitting stations initiated, continued, and/or completed projects to improve the lighting at their facilities, while saving energy. Actions here included:

- Installing energy saving motion sensing light switches. (Botswana)
- Replacing some fluorescent (tube) lights with LED (tube) lights. (Germany, Northern Marianas, and Sri Lanka)
- Replacing some old aviation warning lights and strobes on the tall antenna systems with new LED lights. (Germany, Philippines, and Thailand)
- Replacing some old flood lighting with new LED versions. (Sri Lanka)
- Replacing old incandescent indicator bulbs on the Continental 419-F SW transmitters using in-house modified LED's, which will provide the long-term benefits of greatly reduced indicator failures and brighter and more reliable visual operating and fault cues. (Kuwait)

(3) Other Facilities Related Projects: Five overseas transmitting stations initiated, continued, and/or completed projects to upgrade their facilities. These energy saving actions included:

- Replacing some of their old air conditioning units with new, energy-efficient, inverter type units. (Botswana, Germany, and Sri Lanka)

- Reducing the use of the refrigerant R-22, as the new air conditioners use refrigerant R-410A. (Germany and Sri Lanka)
- Modifying shortwave transmitters to operate in the amplitude modulation companding (AMC) mode, which has proven at other locations to be a significant energy saver. (Botswana)
- Replacing outside windows and doors with double insulated and sealed windows and doors, and installing automatic thermo-controlled louvers to improve the cooling system for the transmitters. (Germany)
- Replacing a defective hot water tank with a solar hot water tank. (Sri Lanka)
- Replacing non-insulated roofing tiles with new tiles, which contain 100 mm of additional foam insulation. (Germany)
- Reducing the cooling requirements of two buildings (main warehouse and power plant) by covering their current roofs with new roofs plus an additional 2-inch layer of insulation between the old roofs and new roofs. (Sao Tome)
- Installing radio controlled thermostats on all its furnace radiators. (Germany)
- Replacing an EPDM (ethylene propylene diene monomer) roofing system on two buildings with a new EPDM system. (Philippines)

(4) Metering and Power Monitoring: The Philippines Transmitting Station completed metering all its transmitters and “appropriate” buildings, and uses these meters to monitor energy consumption. The Sri Lanka Transmitting Station now has advanced meters installed on all its transmitters, and building meters installed on all “appropriate” buildings except one. In addition, the Thailand Transmitting Station has implemented improved power monitoring of its facilities equipment to include tower strobes, chiller plant, and air handling units.

(5) Fuel, Landscaping and Water:

- A number of our sites use a DOD fuel contract to obtain diesel fuel to include the Sao Tome Transmitting Station, which generates all of its electrical power, and the Northern Marianas Transmitting Station, which generates a good amount of electrical power due to frequent commercial power outages. This year, the Northern Marianas is acquiring low sulfur content diesel fuel to operate its large generators. This change was made in an effort to lower the sulfur dioxide emissions normally occurring in diesel generator operations.
- In an effort to reduce its GHG footprint, the Sri Lanka Transmitting Station has started allowing a farmer to graze his goats in the station’s antenna field. This action helps to reduce the amount of grass and overgrown shrubs that need to be maintained through the use of landscaping equipment.
- The Botswana Transmitting Station was able to eliminate the use of a tractor and water bowser to move water between locations at the station by laying a water pipeline from the well at its medium wave transmitter site to its shortwave transmitter site. This action also enabled the station to reduce the amount of potable water it receives from the local water utility.
- To avoid waste and decrease the amount of water used for landscaping purposes, the Kuwait Transmitting Station is in the process of installing a new automated water irrigation system.
- The Philippines Transmitting Station was able to save potable water by reconfiguring its water piping system to supply non-potable vice potable water to its motor vehicle washing bay.

(6) Open Space Design Project: The Agency is in the process of converting, where practical, its office space in Washington from individual private offices to a more modern and open workspace. This multi-year project will reduce the Agency’s rental costs, facilitate the greater use of wireless office technology, and create an office environment that encourages telework. It will also help the Agency shrink its footprint by reducing the amount of square footage required to operate. The project’s initial effort, completed in FY 2015, transformed 35,000 square feet of private office space to open workspace.

(7) Telework: The Agency recently revised its policies and procedures for teleworking, and expanded the program. The new policy document states “...*It is Agency policy to actively promote and encourage Telework as a workplace flexibility arrangement and to allow eligible employees to perform the duties, responsibilities, and other authorized activities of his or her official position from an alternative worksite, rather than at his or her official duty station.*” The policy document also recognizes the strategic sustainability impact of teleworking, as one of the purposes of the program is “*Reducing traffic congestion, fuel costs, vehicular emissions, and infrastructure impact in urban areas, thereby improving the environment...*” Under the revised program, an Agency employee, with approval, can telework up to eight days per pay period, which is a four day increase.

(8) Motor Vehicles: A revision of the portion of the Agency’s Broadcasting Administrative Manual (BAM) covering motor vehicles has been published. Besides describing the procedures for purchasing or leasing, accounting for, and reporting on Agency-owned or -leased motor vehicles, it also documents the actions the Agency must take to meet the requirements of the Federal Energy Management Program (FEMP) that relate to motor vehicles.

(9) Disposal of Electronics: The Agency participated in the GSA E Waste Disposal Day, disposing of 16 pallets of electronic equipment through GSA.

(10) Commuting: The Agency encouraged participation in the Washington DC area’s “Bike to Work Day”. The encouragement included OHR offering each participant a piece chocolate upon arrival.

d. Challenges:

(1) Because we are a small Agency, there are always competing demands for the limited resources available to us. In addition, 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 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:

- Limited funding available for the M&R program.
- 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.
- 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, posing a significant health risk for Agency employees at the station.

- 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.

e. **Planned Actions:** For FY 2015 and beyond, some of the actions planned include:

(1) **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, and expanded telework.

(2) **Open Space Design Project:** This project continues as the Agency has identified an additional 50,000 square feet of office space that can be converted to this open-space design concept. This conversion will allow the Agency to expand without the need to lease additional permanent office space. This project works hand in hand with the Agency's expanded telework program.

(3) **Climate and/or Environmental Related Actions:**

- An earthen levee will be built to protect the medium wave antenna field at the Marathon (Florida) Transmitting Station from increasingly frequent tidal flooding.
- With six 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. Work planned for this area includes the continued rebuilding of antenna structures that were severely damaged when two tropical storms struck the Sri Lanka Transmitting Station.
- To counter the significant health risks posed by the high level of sulfur dioxide emitted into the atmosphere by a nearby smelting plant, M&R funding has been allocated for the design of an air filtration system for the Botswana Transmitting Station's administration and transmitter buildings.

(4) **Infrastructure Preservation:**

- **Antenna Condition Survey:** The Agency is preparing an 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.

- Facilities Condition Survey Program: The Agency has restarted its program to conduct condition surveys of its transmitting sites. These surveys have provided useful guidance for pinpointing facility needs in the past.
- 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. Sustainable Locations for Federal Facilities: This Agency is not planning on re-siting any of its facilities at this time.

b. Sustainable Practices for Designed Landscapes: Refer to paragraph 3c(5) above for examples of landscaping actions taken.

c. Federal Agency implementation of Water Efficiency and Management Provisions of Executive Order 13514: Refer to paragraph 3c(5) above for examples of water efficiency actions taken.

d. E.O. 13653, Preparing the United States for the Impacts of Climate Change:

(1) As part of this effort, the current Climate Change Adaptation Plan was reviewed. No update was required as this plan still reflects the Agency's current situation. Refer to paragraph 3e(3) for planned actions that are related to this area.

(2) Section 2, Modernizing Federal Programs and Policies to Support Climate Resilient Investment: 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.