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Office of Inspector General

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National Aeronautics and Space Administration  
Office of Inspector General  
Washington, DC 20546-0001



AUG 22 2013

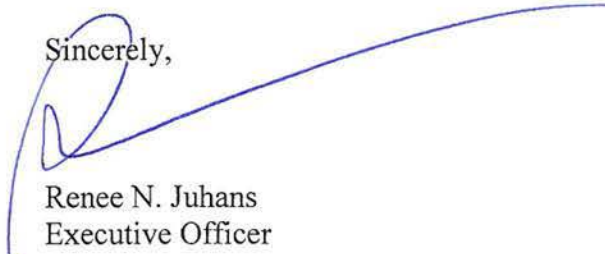
*VIA ELECTRONIC TRANSMISSION*

SUBJECT: Freedom of Information Act (FOIA) Request  
Office of Inspector General FOIA Request Number 2013-21

I am responding to the August 3, 2013, FOIA request that you submitted to the NASA Office of Inspector General (OIG). It was received by the OIG on August 8, 2013. You requested a copy of the "documents and/or any other response provided to the Bicameral Task Force on Climate Change in response to their February 25, 2013 letter request to your office signed by Co-Chairs Henry A. Waxman and Sheldon Whitehouse, Edward J. Markey and Benjamin L. Cardin."

I am providing you with the enclosed document that responds to your request.

Sincerely,



Renee N. Juhans  
Executive Officer

Enclosure



**Office of Inspector General**  
Washington, DC 20546-0001

April 18, 2013

Bicameral Task Force on Climate Change  
U.S. House of Representatives  
564 Ford House Office Building  
Washington, DC 20515

Dear Bicameral Task Force on Climate Change Members,

We write in response to your February 25, 2013, request seeking information about NASA's actions to address a variety of climate change-related issues. In particular, your letter highlights concerns raised by a recent Government Accountability Office report that found the Federal Government not well positioned to address the financial risks presented by climate change.

**Existing Requirements.** An attachment to this letter lists numerous laws, Executive Orders, Federal regulations, and Agency regulations that apply broadly to energy conservation in NASA Programs (see Attachment A). However, such a list could expand significantly if it included all activities that might have an effect on climate change. For example, the list does not include policies regarding NASA launch services, Government-owned vehicle use, or any NASA use of fossil fuels, all of which could have an environmental impact.

**Progress in Meeting Requirements.** As required by Executive Order (EO) 13514, "Federal Leadership in Environmental, Energy, and Economic Performance," every Federal agency must submit an annual Strategic Sustainability Performance Plan (Plan) to document its strategy for sustainability and progress toward achieving specific energy efficiency goals. NASA recently issued its third such Plan, which includes supplementary reports required by the Council on Environmental Quality in 2012 such as the Fleet Management Plan and Climate Risk Management Plan. According to NASA, the Agency is meeting or exceeding the majority of its goals and objectives related to energy conservation.

Released on February 7, 2013, NASA's Plan highlights a series of achievements including:

- NASA exceeded its renewable energy target and added more solar panels to its portfolio.
- Using a cooperative agreement with a neighboring city, 85 percent of the steam generated for Langley Research Center is a direct result of biomass rather than natural gas, decreasing natural gas consumption by 50 million cubic feet.

- NASA Goddard Space Flight Center was the first federal facility to utilize landfill gas, which currently supplies approximately 25 percent of its energy needs.
- In 2012, NASA received Leadership in Energy and Environmental Design (LEED®) Platinum status for buildings at Ames Research Center, Kennedy Space Center, and Langley Research Center. As of mid-2012, over 55 percent of the gross square feet of NASA's LEED-certified buildings rated Gold or Platinum.
- NASA's alternative fueling infrastructure -- present at 12 of 20 NASA locations -- enabled the Agency to increase alternative fuel use by 115,000 gallons (measured as "gasoline gallon equivalents" or GGE) to 264,076 GGE in 2011.
- Repair or replacement of old water distribution pipes led to a 28 percent reduction in potable water consumption across several NASA Centers.

Despite this progress, NASA is not on track to meet its goals of measuring energy used at its data centers. This includes (1) percent of data centers metered, (2) percent of data centers with average central processing unit utilization of 65 percent, and (3) power utilization effectiveness. The specific challenges associated with these issues are detailed in the Plan, a copy of which can be accessed at <http://www.nasa.gov/agency/sustainability/sspp.html>.

Compliance with energy regulations is also monitored by external agencies. To meet Office of Management and Budget (OMB) reporting requirements, NASA has established metrics for energy efficiency, energy conservation measures, and increased use of renewable energy. In January 2013, NASA issued its fiscal year (FY) 2012 Annual Energy Management Plan to OMB and reported the following:

- *Briefly summarize agency efforts under 42 U.S.C 8253(f) in evaluating facilities to identify potential energy conservation measures, implement and follow up on projects, and benchmarked metered buildings.* Through FY 2012, NASA has performed comprehensive evaluations on 80 percent of covered facilities.
- *National Energy Conservation Policy Act and EO 13423 require a facility energy intensity reduction in British thermal units (Btu) per gross square foot (Btu/gsf) of 3 percent per year from an FY 2003 baseline for FY 2006-2015, which totals a 30 percent reduction.* NASA reports a composite energy intensity for applicable buildings of 164,276 Btu/gsf for FY 2012, as compared with the FY 2003 baseline value of 215,906 Btu/gsf. This represents a 24 percent reduction from the baseline, meeting the required 21 percent reduction by FY 2012.
- *Highlight activities undertaken to improve water efficiency.* NASA reports a composite water intensity of 53.1 gal/gsf for FY 2012, as compared with the revised FY 2007 baseline value of 74.1 gal/gsf. This represents a 28.4 percent reduction from the baseline, exceeding the required 10 percent reduction by FY 2012.
- *Describe progress made in FY 2012 in meeting the milestones for the building metering requirements.* Of the 1,198 buildings NASA determined appropriate to

meter, the Agency used advanced meters on 976 buildings (84 percent of NASA's reported purchased electricity consumption) and standard meters on an additional 113 buildings. For FY 2013, NASA reported that 37 additional buildings will use advanced meters, bringing the total number of metered buildings to 1,126 (94 percent), representing about 88 percent of NASA's reported purchased electricity consumption.

In April 2013, NASA received an update from OMB on the Agency's progress towards implementing additional statutory or Executive Order targets and goals reflected in its annual Sustainability Plan including: energy intensity; water intensity; fleet petroleum use; greenhouse gas pollution; green building practices; and renewable energy use. The update indicated that as of December 31, 2012, NASA was on track to meet reported metrics in all categories except sustainable green buildings, a category in which the Agency reported 12.81 percent of its buildings as sustainable as compared to a goal of 15 percent.

**Improving Agency Performance.** We recently reported on NASA's management of energy savings performance contracts that are used to help the Agency meet the energy reduction requirements in EO 13423, "Strengthening Federal Environmental, Energy, and Transportation Management."<sup>1</sup> In response to Federal mandates to reduce energy consumption, six NASA Centers have entered into over \$130 million of energy savings performance contracts since 1999 to fund conservation measures. During our audit, we evaluated whether NASA effectively managed, monitored, and controlled these energy contracts to ensure that payments do not exceed the savings guaranteed in the contracts. We found that one Center had mismanaged its energy contract and may have overpaid the energy company because it could not verify that the conservation measures installed under the contract resulted in the guaranteed annual savings. We recommended NASA: (1) ensure that guaranteed energy savings are being achieved at the Center and if not, determine whether the contract needs to be modified; (2) finalize new policy to ensure employees have specific guidance for managing energy contracts; (3) revise Agency policy to require that estimates for renovation or demolition of facilities include the loss of guaranteed savings from conservation measures installed pursuant to energy contracts; and (4) ensure that procurement and technical staff who are responsible for awarding and administering energy contracts are adequately trained.

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<sup>1</sup> "NASA's Management of Energy Savings Contracts," (IG-13-014, April 8, 2013). NASA management disagreed with our conclusion that this Center's energy contract had been mismanaged. The full report can be found at the following link: <http://oig.nasa.gov/audits/reports/FY13/IG-13-014.pdf>.

We hope that our response addresses the questions raised by the Task Force. If you have any additional questions, please contact Renee Juhans, NASA OIG Executive Officer, at 202-358-1220.

Sincerely,

Handwritten signature in black ink, appearing to read "PKM/A".

Paul K. Martin  
Inspector General



## Attachment A

Below is a list of the primary laws, Executive Orders, and Federal and NASA regulations that apply to energy conservation in NASA Programs.

### Statutes

16 USC 870 et seq. – National Historic Preservation Act  
42 USC 4321 et seq. – National Environmental Policy Act  
42 USC 8251 et seq. – National Energy Conservation Policy Act  
42 USC 8253 et seq. – Energy Management Requirements  
42 USC 17001 et seq. – Energy Independence and Security Act (EISA 2007)  
Public Law 109-058 - Energy Policy Act of 2005 (EPACT 2005)

### Executive Orders (EO)

EO 12114 – Environmental Effects Abroad of Major Federal Actions  
EO 13149 – Greening the Government through Federal Fleet and Transportation Efficiency (revoked by EO 13423)  
EO 13221 – Energy Efficient Standby Power Devices  
EO 13423 – Strengthening Federal Environmental, Energy, and Transportation Management  
EO 13514 – Federal Leadership in Environmental, Energy, and Economic Performance

### Code of Federal Regulations (CFR)

10 CFR Part 434 – Energy Code for New Federal Commercial, and Multi-Family High Rise Residential Buildings  
10 CFR Part 435 – Energy Code for New Federal Commercial, and Multi-Family Low Rise Residential Buildings  
10 CFR Part 436 – Federal Energy Management and Planning Programs  
14 CFR Part 1216 – Environmental Quality  
41 CFR Part 101 – Federal Property Management Regulations

### NASA Regulations

NASA Procedural Requirements (NPR) 8000.4A – Agency Risk Management Procedural Regulations  
NPR 8500.1B – NASA Environmental Management  
NPR 8530.1A – Affirmative Procurement Program and Plan for Environmentally Preferable Products  
NPR 8553.1B – NASA Environmental Management System  
NPR 8570.1 – Energy Efficiency and Water Conservation  
NPR 8580.1A – NASA National Environmental Policy Act Management Requirements  
NPR 8590.1A – Environmental Compliance and Restoration Program  
NPR 8820.2F – Facility Project Requirements