

⋮

Procedure No. GLM-FE-8500.1-9

Revision: A

Effective Date: 4/2015

Expiration Date: 10/2016

## GRC Environmental Programs Manual—Chapter 9

# Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products

*Approved by: Energy and Environmental Management Office Chief*

*Distribution: BMS Library*

**NASA - Glenn Research Center  
Cleveland, OH 44135**

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

### Change Record

<b>Revision</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>C-25, Change Request #</b>	<b>Description</b>
A	4/2015	10/2016		Section 5.5, fifth bullet (Page 9) - Removed a comma. Section 6.6 - Removed reference to Chapter 15 and changed “Chapter 19” to “Chapter 16”. Section 7.0 – Removed inaccurate reference to EEMO Affirmative Procurement Office. Changed COTR to COR throughout document. Updated links and corrected form names. Inserted dates on forms.

*\*\*Include all information for each revision. Do not remove old revision data. Add new rows to table when space runs out by pressing the tab key in the last row, far right column.*

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

## Table of Contents

1.0	PURPOSE.....	4
2.0	APPLICABILITY .....	4
3.0	BACKGROUND.....	4
4.0	POLICY.....	5
5.0	RESPONSIBILITIES .....	5
5.1	Glenn Research Center Civil Servants and Support Service Contractors .....	6
5.2	Glenn Research Center Request Originator .....	6
5.3	Procurement Division .....	7
5.4	Contracting Officers and Contracting Officer’s Representatives .....	7
5.5	Facilities Division.....	8
5.6	Energy and Environmental Management Office, EEMO .....	9
6.0	REQUIREMENTS .....	10
6.1	Environmental Attributes.....	10
6.2	Direct Procurement.....	10
6.3	Support Services Contracts.....	10
6.4	Other Contracts.....	10
6.5	Life-Cycle Cost Analysis.....	10
6.6	Chemical Purchasing .....	11
6.7	Purchasing Categories .....	11
6.7.1	Acquisition Planning .....	11
6.7.2	Simplified Acquisition .....	11
6.7.3	Specification Review and Revision.....	11
6.7.4	Revising Standards To Remove Barriers to Green Purchasing .....	11
6.7.5	Micropurchases .....	11
6.7.6	Federal Supply Sources .....	12
6.8	Request-for-Waiver Process .....	12
6.9	Environmental Reporting.....	12
6.10	VERIFICATION APPROACH .....	13
6.10.1	Awareness Presentations and Training.....	13
6.10.2	Review of Statements of Work, Contracts, Contract Files, and Reports .....	13
6.10.3	Promotion of Alternative Materials.....	13
6.10.4	Reports .....	13
7.0	RECORDS.....	13
8.0	REFERENCES .....	14
	APPENDIX A.—DEFINITIONS AND ACRONYMS.....	15
	APPENDIX B.—REFERENCE TOOLS .....	18
	B.1 Training Tools .....	18
	B.2 Optional Calculators and Tools .....	18
	B.3 Leadership in Energy and Environmental Design Reference Tools .....	18
	APPENDIX C.—RECYCLED-CONTENT WAIVER FORM.....	20
	APPENDIX D.—APPLICABILITY OF FEDERAL ACQUISITION REGULATION (FAR) PART 23 RECOVERED MATERIALS, BIOBASED PRODUCTS, AND WASTE-REDUCTION CLAUSES, AND RELATED GLENN SUPPLEMENTAL REQUIREMENTS .....	25
	D.1 Recovered Material Reporting.....	25
	D.2 Waste-Reduction Reporting.....	25
	APPENDIX E.—FEDERAL ACQUISITION REGULATION (FAR) GREEN PURCHASING REQUIREMENTS .....	27

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

## **Chapter 9.—Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products**

*NOTE: This chapter is maintained and approved by the Energy and Environmental Management Office (EEMO). The last revision date of this chapter was March 2015. The current version is maintained on the Glenn Research Center internet at <http://www.grc.nasa.gov/WWW/FTD/EEMO/index.html>. Approved by: Chief of Energy and Environmental Management Office.*

### **1.0 PURPOSE**

This chapter establishes minimum requirements for purchasing Government-mandated affirmative procurement, environmentally preferable, and biopreferable products. These requirements will minimize solid waste, prevent pollution, and save energy and other resources at the NASA Glenn Research Center (GRC). Presidential Executive Order (EO) **13514**, Federal Leadership in Environmental, Energy, and Economic Performance, requires that Federal agencies consider life-cycle costs and savings, allowing for reduction in waste, energy, water consumption, and other possible detrimental environmental impacts, while achieving sustainable behaviors. This chapter conforms to GRC's Environmental Management System (EMS) as defined in Glenn Procedural Requirement (GLPR) **8553.1**. This reference supports GRC's environmental policy, which promotes pollution prevention, regulatory compliance, and continuous improvement.

### **2.0 APPLICABILITY**

This chapter applies to all personnel at GRC's Lewis Field and Plum Brook Station (civil servants, support service contractors, offsite contractors, tenant organizations, and other employees) who design, construct, or procure designated items using appropriated Federal funds.

### **3.0 BACKGROUND**

GRC is committed to environmental protection consistent with environmental laws and regulations outlined in EO **13514**. This chapter can help GRC purchasers to identify Federal green buying requirements, find green products and services, calculate the costs and benefits of purchasing choices, and manage green purchasing processes.

EO **13514** requires agencies to measure, manage, and reduce greenhouse gas emissions toward agency-defined targets. It describes the process by which agency goals will be set and reported to the President and requires agencies to meet a number of energy, water, and waste-reduction targets, including

- 30-percent reduction in vehicle fleet petroleum use by 2020
- 26-percent improvement in water efficiency by 2020
- 50-percent recycling and waste diversion by 2015
- Sustainability requirements met by 95 percent of all applicable contracts by 2010
- Implementation of the 2030 net-zero-energy building requirement
- Implementation of the storm water provisions of the Energy Independence and Security Act of 2007, Section 438
- Development of guidance for sustainable Federal building locations in alignment with the livability principles put forward by the Department of Housing and Urban Development, the Department of Transportation, and the Environmental Protection Agency (EPA).

**NOTE:** On October 5, 2009, President Obama signed EO **13514**, which sets sustainability goals for Federal agencies and focuses on making improvements in their environmental, energy, and economic performance. "This Executive Order builds on the momentum of the Recovery Act to help create a clean energy economy and demonstrates the Federal government's commitment, over and above what is already being done, to reducing emissions and saving money." This EO consolidates and strengthens six EOs and establishes updated goals,

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

practices, and reporting requirements for environmental, energy, and transportation performance and accountability for the Federal Government: EOs 13423, 13149, 13148, 13134, 13123, and 13101.

#### 4.0 POLICY

It is GRC policy to comply with all applicable regulations regarding green purchasing: selecting and purchasing products to the extent feasible and practical using the EPA’s [Comprehensive Procurement Guideline](#) (CPG); purchasing Government-mandated affirmative procurement, environmentally preferable, and biopreferred products; and encouraging life-cycle cost analyses to be used when sustainable design elements are being evaluated for facility projects and all other appropriate projects.

Affirmative procurements are those where products with recycled content are purchased, as identified by the EPA in 40 Code of Federal Regulations (CFR) [247](#), Comprehensive Procurement Guideline for Products Containing Recovered Materials. The term is also identified in NASA Procedural Requirement (NPR) [8530.1](#), Affirmative Procurement Program and Plan for Environmentally Preferable Products.

Biopreferred procurements follow U.S. Department of Agriculture (USDA) guidelines. Federal programs increase the purchase and use of biopreferred products, which are made from biological or renewable agricultural materials.

In addition, the EPA encourages agencies to consider all internal and external costs associated with a product, process, or activity throughout its entire life cycle—from the acquisition of raw materials to manufacture, recycling, and final disposal.

The amortized annual cost of a product, including capital costs, installation costs, operating costs, maintenance costs, and disposal costs discounted over the lifetime of the product can be identified by conducting a life-cycle cost analysis (Office of Management and Budget (OMB) Circular [A-94](#), Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs). Moreover NASA Policy Directive (NPD) [8820.2](#), Design and Construction of Facilities, pertains to the life-cycle assessment plan, including the policy for the design and construction of facilities. This policy describes the strategy for incorporating, to the maximum extent possible, industry best practices of sustainable design, maintainable design, building commissioning, and safety and security, into the planning and execution of facility projects. The use of these practices ensures that facility projects are delivered with the most economical life-cycle cost, the least environmental impact, and the maximum benefits to the occupant’s health, safety, security, and productivity. The policy also encourages the use of life-cycle cost analyses when sustainable design elements are being evaluated for facility projects. For all appropriate projects, it encourages designers to rate the level of sustainable design by using the Leadership in Energy and Environmental Design (LEED) Green Building Rating System.

NASA shall strive to improve its energy-efficiency and water-conservation practices to save taxpayer dollars, reduce emissions that contribute to air pollution and global climate change, and conserve precious natural resources for future generations. NPR [8570.1](#), Energy Efficiency and Water Conservation, requires each NASA center to develop and maintain an individual energy-efficiency and water-conservation 5-year plan tailored to the needs, resources, and opportunities at that NASA center. Conservation is one of the four principal areas of NASA’s environmental strategy. It is the essence of good stewardship for all the resources that NASA controls, and it reduces the impact of Agency activities on the environment.

#### 5.0 RESPONSIBILITIES

NASA regulations require GRC to increase purchases of products containing recovered materials and environmentally preferable products and services. There are two criteria currently used to determine the status of products relative to affirmative procurement standards: recycled-content and biopreferred-content products. Consideration of environmental prefer ability should begin early in the acquisition process and be rooted in the ethic of pollution prevention, which strives to eliminate or reduce, up front, potential risks to human health and the environment. Therefore, early in the acquisition process, purchasers shall begin to consider environmental prefer ability. Pollution prevention, the reduction or elimination of waste at the source, cannot only reduce pollution but save money for agencies. Furthermore, pollution-prevention measures can lead to a higher degree of environmental protection by reducing subsequent costs for disposal or cleanup of hazardous wastes and materials. A key reason for environmentally preferable purchasing is to protect the environment by reducing waste and pollution at the source

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

with the resulting benefit of reduced overall cost to the Government. GRC employees and contractors have the responsibilities described in Sections **5.1** to **5.6**.

### **5.1 Glenn Research Center Civil Servants and Support Service Contractors**

GRC civil servants and support service contractors shall

- Understand and be knowledgeable about the requirements of EO **13514** and the objectives of NPR **8530.1**, Affirmative Procurement Program and Plan for Environmentally Preferable Products
- Understand and be knowledgeable about the EPA-designated materials list
- Select EPA-designated materials from the CPG list
- Consult early in the procurement process with appropriate parties (e.g., environmental specialists and contract specialists) to facilitate the process of procurement planning
- Participate in life-cycle cost activities when appropriate

### **5.2 Glenn Research Center Request Originator**

The GRC request originator shall

- Understand and be knowledgeable about the requirements of EO **13514** and the objectives of NPR **8530.1**
- Understand and be knowledgeable about and select items from the EPA-designated materials list
- Consult early in the procurement process with appropriate parties (e.g., environmental specialists and contract specialists) to facilitate the process of procurement planning
- Review the statement of work (SOW) or specifications with respect to the specific requirements regarding environmental attributes. For support service contracts or major procurements, this review should be accomplished in collaboration with the Energy and Environmental Management Office (EEMO) (also see Procurement Information Circular (PIC) **01-27**).
- If the product or service involves the use of these materials, review and modify (as appropriate) the SOW, specifications, and/or purchase requisition; document this information on NASA Form (NF) **1707** and proceed with the procurement (If the product or service does not involve the use of these materials, document this information on **NF1707** and proceed with the procurement)
- If the product availability suggests that a waiver of the CPG requirements may be appropriate (e.g. cost, availability, or performance), follow the Recycled-Content Waiver Form (**GRC138**).
- Participate in life-cycle cost activities when appropriate
- Utilize SOWs or specifications that do not include virgin material requirements but do include reuse of products, use of recovered materials, energy and water efficiency, recyclables, and the use of designated items included in the CPG or other environmentally preferable products or services
- To deviate and procure items not on the mandated CPG list, submit a **GRC138** to EEMO for approval on direct purchases over \$10,000
- Report annually on purchased recycled-content and biopreferred products to EEMO on direct purchases over \$10,000
- Utilize SOWs or specifications that do not include virgin material requirements but do include reuse of products, use of recovered materials, energy and water efficiency, recyclables, and the use of designated items included in the CPG or other environmentally preferable products or services
- Begin the request-for-waiver process by comparing the description of the desired product or service with the current EPA list of EPA-designated products in the **CPG**. (If the request originator, after reviewing EPA's list of designated products, and conducting other market research with the assistance of GRC's procurement office, determines that one or more of the exceptions apply, the request originator will prepare a **GRC138** and forward it (and supporting documentation) to the environmental manager for approval.)

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

Certain contracts (e.g., support services) are required by Federal Acquisition Regulation (FAR) clause 52.223–10, Waste Reduction Program, to maintain a waste-reduction program. During the development of the SOW, reporting requirements, and quality assurance surveillance plan, the proposed work must be evaluated with respect to whether NASA requires insight into the contractor’s waste-reduction program. The decision regarding insight should be based on the scope of waste-prevention efforts that is appropriate to the contract size, SOW, and environmental risk. Contractor information delivery requirements should be consistent with GRC’s Environmental Management System (EMS) Implementation Plan and FAR Subpart 23.10.

**NOTE:** Consider environmental and energy factors from the beginning of acquisition planning in order to save money, increase efficiency, and reduce pollution in procurements. Actions shall be consistent with the “waste management hierarchy” of reduce, reuse, and recycle, in that order. In July 2009, the NASA FAR Supplement, Procurement Regulations was formally revised to make the requester’s completion of an **NF1707** mandatory for the majority of purchase requests processed.

### 5.3 Procurement Division

The Procurement Division shall

- Understand and be knowledgeable about the requirements of EO **13514** and the objectives of NPR **8530.1**
- Understand and be knowledgeable about the designated materials list and the request-for-waiver process
- Support efforts to ensure that products and services covered by applicable EPA guidelines are acquired in accordance with requirements from the Resource Conservation and Recovery Act (RCRA), EO **13514**, FAR, and NASA
- Require SOWs or specifications that do not include virgin material requirements but that do include the use of recovered materials, reuse of products, life-cycle analysis, energy and water efficiency, recyclables, and the use of EPA-designated items or other environmentally preferable and biopreferred products
- Facilitate procurement planning for annual required reports
- Support and provide guidance and facilitate acquisition planning with respect to environmentally preferable goods and services, including those available through Federal supply sources
- Assist and support in any market research necessary to determine the availability of environmentally preferable goods and services
- Ensure that solicitations and contracts contain the appropriate provisions and FAR clauses to implement affirmative procurement (FAR Part 23)
- Review and revise specifications, product descriptions, standards, and commercial item descriptions during the acquisition planning stage to enhance NASA’s procurement of recycled, environmentally preferable, and biopreferred products
- Ensure that contracts, grants, and cooperative agreements include provisions that require documents to be printed double sided on recycled paper, and that the standards established in EPA guidelines are met or exceeded
- Modify existing contracts, in consultation with the NASA technical point of contact, that do not have FAR clauses implementing affirmative procurement when feasible (The implementing clauses are located in FAR Part 23, Subpart 23.4, Use of Recovered Materials.)
- Ensure that the estimation, certification, and verification required of NASA vendors and contractors is consistent with the requirements contained in FAR 52.223--5
- Ensure that checkers working for purchase requisitioners review the applicable purchase request for the attachment of a completed **NF1707**. Purchase requests will not be sent to the Procurement Division until a complete **NF1707** is received.

### 5.4 Contracting Officers and Contracting Officer’s Technical Representatives

Contracting officers (COs) and contracting officer’s representatives (CORs) shall

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

- Understand and be knowledgeable about the requirements of EO **13514** and the objectives of NPR **8530.1**
- Understand and be knowledgeable about the EPA-designated materials list and the request-for-waiver process
- Support and provide guidance and facilitate acquisition planning with respect to life-cycle cost analysis and environmentally preferable goods and services. (A life-cycle cost analysis should examine a product's environmental and economic effects throughout its lifetime, including raw material extraction, transportation, manufacturing, use, and disposal.)
- File the original approved **GRC138** with the appropriate contract
- Support and ensure that solicitations and contracts contain the appropriate provisions and FAR clauses (FAR Part 23, Subpart 23.4) implementing affirmative procurement, including reporting requirements
- Maintain information in the contract file on the contractor's response to FAR clause 52.223–8, Estimation of Percentage of Recovered Materials for Designated Items
- At the end of each fiscal year, collect, compile, and provide all data for recycled-content material that was purchased to EEMO
- Include FAR provision 52.223–4, Recovered Materials Certification, in solicitations that are for, or specify the use of, EPA-designated products containing recovered materials.
- Include FAR clause 52.223–9, Estimate of Percentage of Recovered Material Content for EPA-Designated Products, in solicitations and contracts exceeding \$100,000 that are for, or specify the use of, EPA-designated products containing recovered materials.
- Include FAR clause 52.223–10, Waste Reduction Program, in all solicitations and contracts for contractor operation of Government-owned or -leased facilities and all solicitations and contracts for support services at Government-owned or -operated facilities
- Ensure that the contractor submits annual reports, October 1 through September 30, that relate to FAR Part 23, Recovered Materials, Biopreferred Products, and Waste Reduction clauses, and related Glenn Supplemental Requirements (GSRs) to EEMO via the NASA Environmental Tracking System (**NETS**) with a copy sent to the CO by November 30 of each year.

***NOTE:** EO **13514**, builds on and expands the energy reduction and environmental requirements of EO **13423** by making reductions of greenhouse gas emissions a priority of the Federal Government, and by requiring agencies to develop sustainability plans focused on cost-effective projects.*

## **5.5 Facilities Division**

The Facilities Division shall

- Understand and be knowledgeable about the requirements of EO **13514** and the objectives of NPR **8530.1**
- Understand and be knowledgeable about the EPA-designated materials list and the request-for-waiver process
- Review and amend specifications, as appropriate, to encourage the use of recovered materials
- Comply with NASA-accepted best practices regardless of fund source (e.g., NASA program, institutional investment account, or third party). NPR **8820.2**, Design and Construction of Facilities, includes the following:
  - Using life-cycle cost versus first cost to select project systems, equipment, materials, and methods
  - Designing for maintainability to optimize operation and maintenance costs and effort
  - Using environmentally friendly processes, materials, and equipment
  - When a project includes demolition, maximizing reuse versus disposal

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

- Ensuring that construction products are procured with recovered content levels as specified in Part C, Construction Products of the Recovered Materials Advisory Notice (RMAN)
- Consulting early in the procurement process with appropriate parties (e.g., environmental specialists, contract specialists) to facilitate the process of procurement planning
- Utilizing SOWs or specifications that do not include virgin material requirements but that do include the reuse of products, use of recovered materials, energy and water efficiency, recyclables, and the use of designated items included in the EPA CPG or other environmentally preferable products or services
- Prepare **GRC138** for concurrence signature by EEMO
- At the end of each fiscal year, collect, compile, and provide a list of all recycled-content materials purchased to EEMO
- Ensure that the contractor submits annual reports, October 1 through September 30 that relate to FAR Part 23, Recovered Materials, Biopreferred Products, Waste Reduction clauses and related GSRs to EEMO via **NETS** with a copy sent to the CO by December 30 of each year.

In carrying out assigned energy-efficiency and water-conservation responsibilities, per NPR **8570.1**, 1.1.2, the following objectives are of special concern to energy managers and facilities maintenance personnel:

- Supporting the minimization of energy and water consumption without affecting safety or mission operations
- Supporting efforts to make employees aware of the importance of limiting energy and water use to the minimum requirements
- Supporting NASA’s state-of-the-art research mission by implementing energy efficiency and water conservation measures to
  - Modernize aging facilities and infrastructure using innovative resources
  - Maximize funds allocated to NASA programs and projects through reduced expenditures for energy and utility services
  - Support and demonstrate environmental stewardship

In light of extremely limited appropriations for facility and infrastructure investment, NASA is committed to implementing cost-effective energy-efficiency and water-conservation measures by utilizing innovative funding sources and initiatives, such as the following:

- Supporting partnering with other agencies
- Utilizing Energy Savings Performance Contracts and Utility Energy-Efficiency Service contracts
- Supporting efforts to increase employee awareness, reduce the cost of purchased utilities, and utilize alternate fuels and renewable energy technologies

## 5.6 Energy and Environmental Management Office (EEMO)

EEMO shall

- Understand and be knowledgeable about the requirements of EO **13514** and the objectives of NPR **8530.1**
- Understand and be knowledgeable about the EPA-designated materials list and the request-for-waiver process
- Advise procurement originators and COs on acquisition strategies for environmentally preferable products and services, including updates to the list of EPA-designated items and biopreferred products
- Review and approve **GRC138** waivers
- Compile an annual report on the **NETS**

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

- Provide support, guidance, and assistance to GRC in interpreting and implementing the EPA and applicable NASA guidelines for recovered materials
- Conduct annual training on updated changes to the program
- Assist in identifying recycled-content or biopreferred products
- Assist with recycled-content and biopreferred language for SOWs

## 6.0 REQUIREMENTS

GRC is required to procure products with recycled-content materials, biopreferred products (made from biological or renewable agricultural materials), and other environmentally preferable materials. Federal programs increase the purchase and use of these materials, reducing waste and pollution. In addition, GRC is required to report its green purchasing activities every year.

### 6.1 Environmental Attributes

- EPA’s CPG and [recommendations concerning the list of designated products](#)
- Environmentally preferable products or services
- USDA [guidelines and recommendations concerning USDA’s list](#) of designated products under the Food, Conservation, and Energy Act of 2008 (2008 Farm Bill)

**NOTE:** In certain circumstances, specific requirements regarding environmental attributes may conflict practically (e.g., in choosing between a recycled-content product and an ENERGY STAR product). In these circumstances, EEMO may prioritize or weight the evaluation factors in regards to the conflicting requirements, and shall coordinate the weighted evaluation factors with the CO.

### 6.2 Direct Procurement

The affirmative procurement program requires that all direct purchases of CPG-listed products by NASA civil servants contain recovered materials (**FAR** 23.404 b) unless a waiver (**GRC138**) is prepared and distributed in accordance with NASA Policy Guideline (NPG) 8830. (Unless a waiver has been obtained, the CO shall ensure that the clauses at 52.223–4, Recovered Material Certification, and 52.233–9, Estimate of Recovered Material Content for EPA-Designated Products, are in all contracts for the direct procurement of items on the CPG list.)

### 6.3 Support Services Contracts

Section 23.705 of the FAR requires COs to include the clauses at 52.223–10, Waste Reduction Program, when the contract is for the operation of Government-owned or -leased facilities or for support services at Government-owned or -leased facilities. Among other things, the clause at 52.223–10 requires that prime contractors determine when EPA-designated items are used in the performance of a contract. The CO must also include clauses 52.223–4 and 52.223–9 when clause 52.223–10 is included in a contract.

### 6.4 Other Contracts

Contractors may be required to purchase items on the CPG by an explicit requirement contained in specifications, standards, or SOWs. Section 11.101 b of the FAR states that agencies should prepare product descriptions to achieve the maximum practicable use of recovered materials, of other materials that are environmentally preferable, and of products that are energy efficient.

### 6.5 Life-Cycle Cost Analysis

The Office of Federal Procurement Policy Letter 92–4 requires Federal agencies to use life-cycle cost analysis, wherever feasible and appropriate, to assist in selecting products and services. Whenever possible, the cost shall be calculated over the life of the item, not just the initial, upfront cost. When alternative products are being compared, the initial cost of the acquisition, as well as the lifetime maintenance costs, operational costs, and other costs, must be considered in the analysis. A product having a higher initial cost may have a lower operational cost or a higher resale value and will, therefore, prove to be a better value and more cost effective in comparison to the alternatives.

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

## 6.6 Chemical Purchasing

Only an approved list of personnel are allowed to purchase chemicals and hazardous materials. These GRC-approved personnel are responsible for keeping track of purchased chemicals and hazardous materials that are ordered and brought onto into the Center. Chemicals or hazardous materials cannot be purchased with the Government-furnished credit card. Please contact the Chemical Purchasing Office to place orders and for further guidance at 3-8689. EEMO reviews for release all purchase requests for hazardous chemicals and evaluates the hazard potential of each hazardous chemical being purchased. Note that a waiver, in lieu of a life-cycle assessment (LCA), may be requested from the chapter lead.

Chapter 16 establishes policies and procedures pertaining to the procurement, use, handling, disposal, and overall management of ozone-depleting substances (ODSs), products made from or containing ODSs, and ODS substitutes (see FAR 52.223.10, Waste Reduction Program, FAR 52.223-11, Ozone-Depleting Substances, and FAR 52.223-12, Refrigeration Equipment and Air Conditioners). Any purchase of ODSs and products made from or containing ODS materials must comply with the requirements of 48 CFR Part 1, 40 CFR Part 82, and EO 13423.

**NOTE:** All such materials must be reported, tagged, and tracked. Items that require a deposit or have a rental charge associated with them (e.g., cylinders, dewars, etc.) must be purchased by the Chemical Purchasing Office for accountability purposes.

## 6.7 Purchasing Categories

### 6.7.1 Acquisition Planning

The buy-recycled requirements shall be considered during the acquisition planning stage if non-Federal supply sources are used. EO 13423 and FAR Part 7 provide that, in developing plans, drawings, work statements, specifications, or other product descriptions, GRC shall consider a broad range of factors including the elimination of virgin material requirements, the use of biopreferable products, the use of recovered materials, reuse of product, life-cycle cost, recyclables, the use of environmentally preferable products, waste prevention (including toxicity reduction or elimination), and ultimate disposal, as appropriate. These factors should be considered in acquisition planning for all procurements and in the evaluation and award of contracts (i.e., the bidder most able to cost-effectively satisfy the recovered-material-content specifications as well as the performance/design specifications outlined in the procurement solicitation). A life-cycle analysis is encouraged during this early planning stage.

### 6.7.2 Simplified Acquisition

The buy-recycled requirements apply when EPA-designated products are purchased or supplied for use in a contract. FAR requires agency CO's to insert the clause at 52.211-5, Material Requirements, in all solicitations and contracts for supplies that are not commercial items. FAR also requires COs to insert the clause at 52.223-10, Waste Reduction.

### 6.7.3 Specification Review and Revision

Program offices are responsible for reviewing and revising specifications, product descriptions, and standards during the acquisition planning stage to enhance GRC's procurement of recycled-content products.

### 6.7.4 Revising Standards to Remove Barriers to Green Purchasing

Standards or specifications unrelated to performance or presenting barriers to procuring recycled-content products should be revised or eliminated when procurement specifications are being reviewed or drafted. When GRC's specifications are being revised, requirements for virgin materials shall be eliminated, preference for recovered materials to the maximum extent practicable shall be added, and the purchase of products containing recovered material shall be allowed.

### 6.7.5 Micropurchases

Micropurchases are credit card purchases below the \$3,000 threshold. The requirement to purchase recycled-content CPG items applies to all purchases, including those at or below the micropurchase threshold. EO 13423 requires purchasers making micropurchases to first consider purchasing recycled-content products.

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

**NOTES:** Micropurchases are not subject to waiver documentation requirements, but must meet the specific requirements regarding environmental attributes. Direct procurement of EPA-designated CPG materials that do not meet the minimum recovered-material standards require a waiver approved by the official designate.

### 6.7.6 Federal Supply Sources

Established Federal supply sources, such as the General Services Administration (GSA), Government Printing Office, Javits-Wagner-O' Day Program, the Defense General Supply Center, and UNICOR are competitive sources for EPA-designated items and other recycled-content products. Procuring recycled-content products through these sources offers the following advantages:

- The products have been bid competitively.
- The products meet or exceed EPA minimum-content standards for recovered materials.
- Electronic catalogs identify CPG-compliant products.

### 6.8 Request-for-Waiver Process

The request-for-waiver process begins with the request originator comparing the description of the desired product or service with the current EPA [list of designated products](#).

1. If after reviewing EPA's designated products and conducting other market research with the assistance of the Procurement Division, the request originator determines that one or more of the exceptions apply, the request originator will prepare a **GRC138** (see the sample in Appendix C) and forward it and supporting documentation to the EEMO for approval.
2. When cost is the basis of the waiver justification, the **GRC138** shall include documented consideration of the life-cycle cost analysis for the use of the product, as well as the initial cost.
3. When approved, the original **GRC138**, along with the **NF1707** and other necessary purchase documentation, is forwarded to the Procurement Office.
4. If the request for waiver is not approved, the request originator shall revise the request to include the EPA minimum-recovered materials standard for that item.
5. Unresolved disputes regarding waivers shall be referred to the NASA environmental executive.
6. Purchase requests and/or requisitions that are forwarded to the Procurement Division with an incomplete **NF1707** (with respect to the "Affirmative Procurement" section) will not be finalized until a completed **NF1707** is received.
7. According to RCRA section 6002(c) and EO **13423**, Sections 402(c) and 502(c), agency decisions to not buy recycled-content products must be justified in writing. RCRA provides four justifications:
  - a. The product is not available competitively.
  - b. The product is not available within a reasonable time frame, 48 hours.
  - c. The product does not meet reasonable performance standards.
  - d. The product is only available at an unreasonable price, 10 percent or more higher than nonrecycled-content products.

### 6.9 Environmental Reporting

1. This resource is a supporting component in compliance with Section 9002 of the Farm Security and Rural Investment Act of 2002. It directs the USDA to develop and implement a comprehensive preferred procurement program for the Federal Government.
2. The law requires Federal agencies to give procurement preference to USDA-designated biopreferred products and to develop affirmative procurement programs for purchasing them and establishing tracking and reporting systems (i.e., USDA Awareness Training for the Biopreferred<sup>SM</sup> Program Biobased Products Best Practices Guide)

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

3. Some required data or information pertains to procurement or contract management activities and responsibility is shared by EEMO and the Procurement Division to ensure that the data and information reported are accurate. All environmental reports to NASA Headquarters that pertain to contracts, procurement, or acquisition will be coordinated with the procurement officer before submission.
4. The request originator and/or the CO, as appropriate, shall document the decision not to buy recycled-content products. The original copy of the documentation becomes part of the original contract file.
5. The request originator is responsible for submitting a copy of **NF1707** to the responsible program manager.
6. GRC's program manager is responsible for forwarding a copy of all **GRC138** waivers to EEMO within 30 days for annual reporting purposes in **NETS**.

**NOTE:** These requirements are not in conflict with mandatory source procurement provisions. Once the specifications (including specific requirements regarding environmental attributes) are finalized, mandatory sources are considered to determine if procurement proceeds to commercial sources, as per procurement guidelines and regulations.

## **6.10 VERIFICATION APPROACH**

EEMO takes several proactive steps to verify that GRC employees and contractors are complying with requirements for green product purchasing (including green chemicals), life-cycle assessments, justification waivers (**GRC138s**), direct purchasing for contracts over \$100,000, waste reduction, acquisition planning, and environmental reporting.

### **6.10.1 Awareness Presentations and Training**

EEMO provides awareness presentations and training about green procurement to contracting officers, contracting officer's technical representatives, program managers, requisitioners, and bankcard holders.

### **6.10.2 Review of Statements of Work, Contracts, Contract Files, and Reports**

EEMO examines statements of work (SOWs) and contracts for support services, facility design, and other services and products to ensure that green purchasing FAR requirements are included (**NF1634**). Contract files (in the Procurement Division), System for Administration, Training, and Educational Resources for NASA (SATERN) attendance sheets, forms, and awareness training requests are reviewed to ensure that attendance at training and awareness sessions and purchases of green products (including green chemical alternatives) have been documented. Contract files are reviewed to make sure that market research, **GRC138** waivers, and **NF1707s** have been filed.

In addition, P-card purchases are reviewed periodically, **GRC138s** are reviewed and approved, and contracts over \$100,000 are examined for direct mandated purchasing to comply with FAR 52.020.223 and 52.229. Monthly waste disposal reports and contractor life-cycle assessments and waste-reduction plans are also reviewed (FAR 52.229, 229, and Part 7).

### **6.10.3 Promotion of Alternative Materials**

Alternative materials, especially green chemicals and USDA alternatives, are identified for requisitions when available. To encourage the use of alternative materials, EEMO reviews products, services, and market research documents and recommends alternative materials for safety permit reviews.

### **6.10.4 Reports**

EEMO collects green purchasing data from contractors and compiles and submits green activities in **NETS** reports and annual RCRA reports (FAR 52.202, 52.223, 52.223.10, and 52.229).

## **7.0 RECORDS**

Life-cycle assessment analysis.—Maintained by CO, with copy sent to EEMO.

**GRC138**, Recycled Content Waiver Form.—Original approved forms maintained by the appropriate contracts; copies maintained by EEMO.

Annual training attendance sheets.—Maintained by the Human Capital Development Division.

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

**NF1707**, Special Approvals and Affirmations of Requisitions.—Original approved forms maintained by the appropriate contracts; copies maintained by EEMO.

**NF1634**, Contracting Officer’s Representative (COR)/Alternate COR Delegation.—Original approved forms maintained by the appropriate contracts; copies maintained by EEMO.

## 8.0 REFERENCES

<b>Document number</b>	<b>Document name</b>
40 CFR <a href="#">247</a>	U.S. EPA, Comprehensive Procurement Guideline for Products Containing Recovered Materials
<a href="#">40 CFR</a>	Protection of the Environment
EO <a href="#">13514</a>	Federal Leadership in Environmental, Energy, and Economic Performance— This Executive Order sets sustainability goals for Federal agencies and focuses on making improvements in their environmental, energy, and economic performance.
FAR 52	Use of Recovered Materials
<a href="#">GLM-QS-8500.1</a>	GRC EEMO, Environmental Programs Manual
NPR <a href="#">8530.1</a>	Affirmative Procurement Requirements for Environmentally Preferable Products
NPR <a href="#">8570.1</a>	Energy Efficiency and Water Conservation
NPR <a href="#">8820</a>	Design and Construction of Facilities
RCRA	Resource Conservation Recovery Act
RMAN	Recovered Materials Advisory Notice

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

## APPENDIX A.—DEFINITIONS AND ACRONYMS

**10 Code of Federal Regulations (CFR) 434, Energy Code for New Federal Commercial and Multi-Family High Rise Residential Buildings.**—This regulation establishes energy conservation performance standards that are mandatory for the design of Federal buildings (see Circular **A-94**).

**14 Code of Federal Regulations (CFR) 1216, Environmental Quality.**—This regulation requires an environmental analysis for each project and an environmental assessment for each discrete project unless the action is one normally requiring an environmental impact statement or the action is categorically excluded.

**Affirmative procurement products.**—Those commercial or industrial products (other than food or feed) that are manufactured from recycled and reclaimed materials (EO **13423**) and/or biopreferred products.

**Biopreferred products.**—Commercial or industrial products (other than food or feed) that utilize biological products or renewable domestic agricultural plant, animal, marine, or forestry materials; (EO **13423**); see U.S. Department of Agriculture’s [list of biopreferred products](#).

### **Building for Environmental and Economic Sustainability (BEES)**

**Circular A-94, Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs Within NPR 8820.2.**—Discrete construction of facilities projects must have a life-cycle cost analysis and a draft budget narrative (see the [NASA Business Case Guide For Facilities Projects](#)).

**Code of Federal Regulations (CFR), Title 40, Protection of Environment.**—The Code of Federal Regulations is a publication established by Act of Congress (44 U.S.C. Section 1510). It represents a compilation of all the regulations issued by Federal administrative agencies that have “general applicability and legal effect.” Title 40 of the CFR covers a wide range of subjects that apply to recycling affirmative procurement.

**Conservation.**—Conservation of water, energy and other resources are a concern as they relate to the product and the product’s use. Consideration should be given to a product’s life cycle at NASA and at the vendor.

### **Contracting officer (CO)**

### **Contracting officer’s technical representative (COTR)**

### **Energy and Environmental Management Office (EEMO)**

### **Environmental Management Branch (EMB) at Glenn Research Center**

**Energy use reduction.**—The most desirable products in this category would have the greatest reduction in energy usage at Glenn Research Center.

### **Environmental Management Branch (EMB)**

### **Environmental Management System (EMS)**

### **Environmental Protection Agency (EPA)**

**Executive Order (EO) 13514.**—President Obama signed EO **13514**, which sets sustainability goals for Federal agencies and focuses on making improvements in their environmental, energy, and economic performance. "This Executive Order builds on the momentum of the Recovery Act to help create a clean energy economy and demonstrates the Federal government’s commitment, over and above what is already being done, to reducing emissions and saving money." This EO consolidates and strengthens six EOs and establishes updated goals, practices, and reporting requirements for environmental, energy, and transportation performance and accountability for the Federal Government: EOs 13423, 13149, 13148, 13134, 13123, and 13101.

### **Federal Acquisition Regulation (FAR)**

### **Glenn Procedural Requirement (GLPR)**

### **Glenn Research Center (GRC)**

### **Glenn Supplemental Requirement (GSR)**

**Hazardous waste minimization.**—Hazardous waste is defined by the Resource Conservation and Recovery Act. The most desirable products in this category would have the greatest potential for minimizing hazardous waste

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

generation at Glenn Research Center. Consideration should be given to treatment, onsite disposal, and offsite transfers.

### **Leadership in Energy and Environmental Design (LEED)**

**Life-cycle assessment (LCA).**—This assessment involves the comprehensive examination of a product’s environmental and economic aspects and potential impacts throughout its lifetime, including raw material extraction, transportation, manufacturing, use, and disposal (EO **13514**). The International Standards Organization has a slightly different definition of the life-cycle assessment: “Compilation and evaluation of the inputs, outputs, and the potential environmental impacts of a product system throughout its life cycle.” In this chapter, the term implies that both definitions must be satisfied.

**Life-cycle cost effective.**—The life-cycle cost of a product, project, or measure that has been estimated to be equal to or less than the current or standard practice or product.

### **NASA Environmental Tracking System (NETS)**

**NASA Form (NF) 1509, Facility Project-Brief Project Document, and NF1510, Facility Project Cost Estimate.**—These forms are required for all construction of facilities (CoF) projects requested for inclusion in the budget year. Discrete CoF projects also must have a life-cycle cost analysis and a draft budget narrative (see [http://www.hq.nasa.gov/office/codej/codejx/Assets/Docs/Case\\_Guide\\_4-20-06.pdf](http://www.hq.nasa.gov/office/codej/codejx/Assets/Docs/Case_Guide_4-20-06.pdf)).

**NASA Policy Directive (NPD) 8820.2, Design and Construction of Facilities.**—This policy directive stipulates that new property shall be purchased, constructed, and/or operated only when existing capabilities (including those owned by NASA and other external entities) cannot be used or modified cost effectively. In addition, industry-best practices of sustainable design, maintainable design, building commissioning, and safety and security shall be incorporated, to the maximum extent possible, into the planning and execution of facility projects.

### **NASA Policy Guideline (NPG)**

**NASA Procedural Requirements (NPR) 8530.1**—This procedural requirement is for acquiring Environmental Protection Agency (EPA)-designated products required by the Resource Conservation and Recovery Act of 1976 (42 U.S. Code (U.S.C.) 6962) and EO **13423** of January 24, 2007, Strengthening Federal Environmental, Energy, and Transportation Management.

### **Office of Management and Budget (OMB)**

#### **Ozone-depleting substance (ODS)**

#### **Procurement Information Circular (PIC)**

**Recycling and/or beneficial reuse potential.**—Recyclable products can be collected and remanufactured into new products after they have been used. These products do not necessarily contain recycled materials and only benefit the environment if people recycle them after use.

**Recovered Materials Advisory Notice (RMAN).**—This notice is linked to affirmative procurement by showing the designated percentages of Comprehensive Procurement Guideline III Items. These CPG products can be found through the U.S. General Services Administration and the Defense Logistics Agency.

### **Resource Conservation and Recovery Act (RCRA)**

**Resource use reduction.**—The most desirable products in this category would have the greatest reduction in usage of other resources at GRC. Reduction of nonrenewable resources, including petroleum solvents, should be rated higher than reduction of renewable resources. Emphasis should also be placed on eliminating animal-derived or virgin forest products.

Preference should be given to products that do not contain unnecessary components, such as fragrances or dyes.

**NOTE:** This category applies to environmental emissions, health benefits, and safety benefits. The focus is on within-facility everyday standard use (versus accidental); that is, expected emissions, health problems, and safety problems, for any exposure route (air, water, soil, or skin contact). Consideration should be given to a product’s life cycle at NASA and at the vendor.

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

**Solid-waste minimization.**—The most desirable products in this category would have the greatest potential for minimizing solid-waste generation at GRC. The idea is to reduce the use of landfill space and the need for more landfill area. Packaging—a large component of solid-waste generation—can be reduced if more concentrated products are purchased.

**Statement of work (SOW)**

**Sustainable design (SD).**—This overarching concept incorporates appropriate sustainable design elements into facilities planning, design, construction, operation, and maintenance that enhance and balance facility life-cycle cost, environmental impact, and occupant health, safety, security, and productivity. The essential elements of NPD **8820.2**, Design and Construction of Facilities, include

- Energy efficiency and water conservation
- Site selection to minimize environmental and transportation impact and, if possible, to enhance the environment
- Use of sustainable materials (reused, recycled, recyclable, nontoxic, low embodied energy content, and renewable)
- Emphasis on durability and efficiency of materials and equipment
- A healthy environment not limited to healthy indoor air quality
- Features that support of enhanced worker productivity
- Design for personnel safety and security
- Design for decommissioning and disposal
- Enhanced building operating and maintenance characteristics
- A philosophy that defines operational objectives, then tests and verifies that all building systems and components have been properly installed and perform to the level intended

**System for Administration, Training, and Educational Resources for NASA (SATERN)**

**U.S. Code (U.S.C.)**

**U.S. Department of Agriculture (USDA)**

**Waste Reduction Model (WARM)**

**Water use reduction.**—The most desirable products in this category would have the greatest reduction in water usage at GRC.

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

## APPENDIX B.—REFERENCE TOOLS

### B.1 Training Tools

- Green Purchasing training course, System for Administration, Training, and Educational Resources for NASA (SATERN)
- [Environmentally preferable purchasing tools](#).—This resource developed by the Environmental Protection Agency (EPA) can help Federal purchasers put environmentally preferable purchasing into practice.
- Affirmative procurement environmentally preferable product lists.—These can be viewed on EPA’s site under CPG listings.
- Biopreferred product lists.—These can be viewed on the on USDA’s site under BioPreferred listings.
- Life Cycle Analysis training course, System for Administration, Training, and Educational Resources for NASA (SATERN)

### B.2 Optional Calculators and Tools

- [Building for Environmental and Economic Sustainability \(BEES\)](#).—This software is a technique for selecting cost-effective, environmentally preferable building products. In support of the 2002 Farm Security and Rural Investment Act (Public Law (PL) 107–171), BEES was adapted to include biopreferred products.
- [Electronics Environmental Benefits Calculator](#).—This calculator is intended to assist institutional purchasers, including Federal Electronic Challenge program participants, in quantifying the benefits of environmentally sound management of electronic equipment.
- [Calculating the Benefits of Purchasing, Reusing, & Recycling Computers](#)
- The Green Matrix.—This software is designed to cross-reference topics of sustainability with the standard phases of project design, thereby offering appropriate strategies for a particular phase of work.
- Building Materials Reuse Calculator.—This calculator helps to estimate the environmental benefits of salvaging and reusing building materials, rather than buying and installing new ones. It also calculates potential construction-waste reduction.
- [ENERGY STAR Quantity Quotes](#).—This Web site links institutional and corporate purchasers to ENERGY STAR partners offering bulk procurement arrangements. You can register as a supplier or purchaser.
- Green Chemicals Alternatives Purchasing Wizard.—This tool helps users to reduce the hazardous waste profile in research labs.
- [Waste Reduction Model \(WARM\)](#).—The EPA created WARM to help solid-waste planners and organizations track and voluntarily report reductions of greenhouse gas emissions from several different waste management practices. This is a good tool for quantifying environmental activities from a macrolevel perspective.

### B.3 Leadership in Energy and Environmental Design Reference Tools

- [Building Green](#)
- Construction Initiative.—The EPA’s Construction Initiative is a collaborative, public-private sector effort to increase the recycling and reuse of industrial materials in building and transportation construction projects across the Nation. It is a part of the EPA’s Resource Conservation Challenge, a national program that provides renewed urgency to the EPA’s message of reducing, reusing, and recycling valuable materials (NPR [8530.1](#)).
- [Greenbuild365](#).—Greenbuild365 provides a learning portal for green building education.
- [High Performance Buildings](#).—This Web site links to and provides highlights from the U.S. Green Building Council, the Leadership in Energy and Environmental Design (LEED) Green Building Rating

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

System, case studies of green construction efforts, software and databases to aid in determining which construction products and processes are the most effective, and assorted high-performance construction guidelines and standards.

- Sustainable Sites —This cooperative effort, which was intended to supplement existing green building and landscape guidelines, is becoming a standalone tool for site sustainability.

With regards to the construction and/or renovation of buildings and structures, a number of potentially useful computer programs have been screened for use at GRC as part of the conceptual design and/or materials selection process. The use of such programs would need to be incorporated into the current construction project process. The computer programs that have been screened thus far, and that may serve their stated purposes at GRC, include

- Federal Methodology for Life-Cycle Cost Analysis (10 CFR [436](#)).—This clearly has applications for evaluating life-cycle cost analyses of energy and water conservation. Additional applications need further evaluation.
- [ATHENA Impact Estimator](#) (from the ATHENA Sustainable Materials Institute).—This software allows conceptual building designs to be compared in a more broad-based life-cycle framework and has implications for the selection of building materials.
- [BEES](#).—This software implements a systemic evaluation of environmental and economic factors for the selection of building products. It meets the ASTM International standard for life-cycle cost method.
- [Building Life-Cycle Cost](#) (BLCC).—This software provides computational support for the analysis of capital investments in buildings.
- DISCOUNT.—This software computes discount factors and related present values, future values, and financial parameters.
- [EMISS](#).—This program is designed to estimate air pollution emission factors related to energy use in buildings.
- [ERATES](#) (electricity rates).—This software calculates the monthly and annual electricity costs for a facility, building, or system.
- [Energy Plus](#).—This new-generation building-energy simulation program is designed for modeling buildings and the associated heating, cooling, lighting, ventilation, and other energy flows.
- SpecIntact (Specifications-Kept-Intact).—This automated system for preparing standardized facility construction specifications is used worldwide by NASA, the U.S. Naval Facilities Engineering Command, and the U.S. Army Corps of Engineers.
- LCA (Life Cycle Analysis).—This is a life-cycle assessment matrix for considering alternative products.

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

**APPENDIX C.—FORM SAMPLES**

**C.1 Recycled Content Waiver Form (GRC138)**

<https://nef.nasa.gov/>

<b>Recycled Content Waiver</b>	
<p>This form is used for requests for materials specified in the Environmental Protection Agency's regulation 40 CFR 247, Comprehensive Procurement Guideline for Products Containing Recovered Materials and as required in Executive Order 13423, that do not meet the recycled specification.</p>	
Requestor Name: _____	Date: _____
Location: _____	Phone: _____
Material requested: _____ <i>(See Comprehensive Procurement Guidelines CGG - <a href="http://www.epa.gov">www.epa.gov</a>)</i>	
Supplier: _____	
Check all that apply: <ul style="list-style-type: none"> <li><input type="checkbox"/> Not available competitively within a reasonable time frame</li> <li><input type="checkbox"/> Does not meet appropriate performance standard</li> <li><input type="checkbox"/> Price unreasonable</li> </ul>	
Supporting information <i>(Must be completed):</i>	
Signature of Requestor Originator: _____	
<b>Please send completed form to the Safety, Health, and Environmental Division (SHeD), Mail Stop 64.</b>	
Approvals:	
_____	_____
Safety, Health, and Environments Division (SHeD)	Date
_____	_____
Affirmative Procurement Lead	Date

April 20, 2015

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title: Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products</b>	
	<b>Document No.: GLM-FE-8500.1-9</b>	<b>Rev.: A</b>

**C.2 Special Approvals and Affirmations of Requisitions (NF1707)**

 National Aeronautics and Space Administration		<h2>Special Approvals and Affirmations of Requisitions</h2>	
Center	<input type="checkbox"/>	Requisition Number	Requesting Organization
Name of Approver	Approver Signature		Date
<b>SECTION 1 - INFORMATION SYSTEMS AND ELECTRONIC AND INFORMATION TECHNOLOGY ACCESSIBILITY</b>			
<b>I. INFORMATION SYSTEMS</b>			
<input type="checkbox"/> This procurement <b>does not</b> involve the acquisition of an information system, information technology hardware or software, nor does it involve services where the contractor will have access to NASA information systems.			
<input type="checkbox"/> This procurement involves the acquisition of an information system, information technology hardware or software, or services where the contractor will have access to NASA information systems. It has been reviewed by the Center CIO or the Headquarters operations CIO to determine if the purchase has a System Security Plan (SSP) that includes a FIPS-199 for a moderate- or high-impact information system, as defined by the National Institute of Standard and Technology (NIST).			
The FIPS 199 impact designation for this procurement is _____			
The CIO recommends inclusion of the following clauses:			
<input type="checkbox"/> FAR 52.204-9 Personal Identify Verification of Contractor Personnel			
<input type="checkbox"/> NFS 1852.204-76 Security Requirements for Unclassified Information Technology Resources			
To ensure compliance with federal and nasa information system requirements.			
<b>II. INTERNET PROTOCOL VERSION SIX (IPv6)</b>			
<input type="checkbox"/> This procurement does <b>not</b> include items that will use internet protocol (IP) networking to communicate			
OR			
<input type="checkbox"/> This procurement includes items that will use IP networking to communicate			
AND			
<input type="checkbox"/> Items are IPv6 capable ( <i>Attach USGv6 Suppliers Declaration of Conformity - See &lt;<a href="http://www.antd.nist.gov/usgv6/usgv6-v1.pdf">http://www.antd.nist.gov/usgv6/usgv6-v1.pdf</a>&gt;</i> )			
OR			
<input type="checkbox"/> A waiver signed by the cognizant OCIO official is attached.			
<b>III. FOR SOFTWARE AND/OR MAINTENANCE ACQUISITION (REF. NFS 1807.70)</b>			
<input type="checkbox"/> This procurement does <b>not</b> involve the acquisition of software and/or software maintenance.			
OR			
<input type="checkbox"/> This procurement does involve the acquisition of software and/or software maintenance.			
AND			
<input type="checkbox"/> The requestor has coordinated with the ELMT and determined that the requirement shall be fulfilled through the ELMT program. Documentation indicating the aforementioned coordination is attached.			
OR			
<input type="checkbox"/> The requestor has coordinated with the center CIO and ELMT and obtained approval to acquire the requirement outside the ELMT program (e.g. placement of a new contract or order, exercising an option on an existing contract, requesting a contractor to procure through an existing contract, or placing an order by a Governmentwide purchase card). Documentation indicating the aforementioned coordination is attached.			
<b>IV. ELECTRONIC AND INFORMATION TECHNOLOGY ACCESSIBILITY (EITAC) SECTION 508</b>			
<input type="checkbox"/> The procurement does <b>not</b> include electronic and information technology (EIT) items.			
OR			
<input type="checkbox"/> This procurement does include EIT items.			
AND			
<input type="checkbox"/> They meet the applicable accessibility standards at 36 CFR part 1194. ( <i>Attach market research documentation - See PIC 05-01 located at <a href="http://www.hq.nasa.gov/office/procurement/regs/pic05-01.html">http://www.hq.nasa.gov/office/procurement/regs/pic05-01.html</a></i> )			
OR			
<input type="checkbox"/> Is for a commercial supply or service and market research has determined that some or all of the applicable access board standards cannot be met by supplies or services available in the commercial market place in time to satisfy agency delivery requirements. ( <i>Attach EIT non-availability determination.</i> )			
OR			
<input type="checkbox"/> Is exempt from compliance with applicable accessibility standards based on the following exception:			
<input type="checkbox"/> The item is for a national security system;			
<input type="checkbox"/> The item will be located in spaces frequented only by service personnel for maintenance, repair or occasional monitoring of equipment; or			
<input type="checkbox"/> Would impose an undue burden on the agency. ( <i>Attach undue burden determination.</i> )			
<small>(NOTE: Templates for the determinations noted in this section are attachments to PIC 05-01, available at: <a href="http://www.hq.nasa.gov/office/procurement/regs/pic05-01.html">http://www.hq.nasa.gov/office/procurement/regs/pic05-01.html</a>)</small>			

SECTION 2 - ENVIRONMENTAL /SUSTAINABLE ACQUISITION
<p><i>Ref. FAR subpart 23.1 and NPR 8530.1. The request originator has searched the <a href="#">Green Procurement Compilation (GPC)</a> to identify applicable federal green/sustainable acquisition requirements for products and services</i></p> <p><input type="checkbox"/> This procurement does not acquire any products or services listed in the GPC.</p> <p style="text-align: center;">OR</p> <p>This procurement does acquire products or services listed in the GPC in the following programs (check all that apply):</p> <p><input type="checkbox"/> EPA's Comprehensive Procurement Guidelines</p> <p><input type="checkbox"/> Electronic Product Environmental Assessment Tool (EPEAT)</p> <p><input type="checkbox"/> EPA's Significant New Alternatives Policy (SNAP) Program</p> <p><input type="checkbox"/> EPA's Watersense Program</p> <p><input type="checkbox"/> Energy Star</p> <p><input type="checkbox"/> FEMP (Federal Energy Management Program) Energy Efficient Products</p> <p><input type="checkbox"/> USDA's Biopreferred Designated Products</p> <p style="text-align: center;">AND</p> <p><input type="checkbox"/> The specifications or statement of work include applicable sustainable acquisition program requirements.</p> <p style="text-align: center;">OR</p> <p><input type="checkbox"/> This procurement does acquire products or services listed in the GPC; however, the sustainable product or service does not meet the functional requirements of the requestor. The appropriate waiver or justification documentation for not including the sustainable acquisition requirements is attached.</p>
SECTION 3 - SERVICE CONTRACTING
<p><input type="checkbox"/> This is a requirement for supplies and no services are being procured.</p> <p style="text-align: center;">OR</p> <p><input type="checkbox"/> This requirement is for, or includes, services. The services to be performed (check all that apply):</p> <p><input type="checkbox"/> 1. Will not be used for the performance of personal services. (<i>Ref. FAR 37.104 and NFS 1837.104</i>)</p> <p><input type="checkbox"/> 2. Will not be used for the performance of inherently governmental functions. (<i>Ref. FAR 7.503</i>)</p> <p><input type="checkbox"/> 3. Are not presently being performed, nor recently performed, by government employees. (Contracting out for services performed by civil servants requires a public-private competition.) (<i>Ref. OMB Circular A-76</i>)</p> <p><input type="checkbox"/> 4. Will be advisory and assistance services. (<i>See definition at FAR 2.1, and FAR 37.204 and NFS 1837.204</i>)</p>
SECTION 4 - TECHNICAL APPROVAL
<p><i>(The following affirmations are to be made by the Program or Project Technical Authority(ies))</i></p>
<p><b>I. SPACE FLIGHT AND GROUND SUPPORT PROGRAMS</b></p> <p><input type="checkbox"/> This procurement is not for space flight and ground support programs.</p> <p style="text-align: center;">OR</p> <p><input type="checkbox"/> This procurement is for space flight and ground support programs and projects and technical standards and specifications cited in the solicitation/award are:</p> <p><input type="checkbox"/> 1) The most recent version, 2) tailored to the needs of the project and its elements, and 3) registered in a watch list at <a href="https://standards.nasa.gov">https://standards.nasa.gov</a> to receive notification when standards or specification change.</p> <p style="text-align: center;">OR</p> <p><input type="checkbox"/> Exceptions have been approved by the technical authorities, and are attached hereto. (<i>See NPR 7120.5</i>)</p> <p><b>II. COMMUNICATION AND NAVIGATION CAPABILITIES</b></p> <p><input type="checkbox"/> This procurement has no requirements related to space communication and navigation (SCaN) capabilities of NASA, of other us government agencies, or of other nations.</p> <p style="text-align: center;">OR</p> <p><input type="checkbox"/> This procurement has requirements related to space communication and navigation capabilities of NASA, of other US Government agencies, or of other nations, and the requisition has been coordinated with the office of space communication and navigation (scan) in the Office of Space Operations Mission Directorate (SOMD).</p> <p style="text-align: center;"><i>(See NPD 8074.1, "Management and Utilization of NASA's Space Communication and Navigation Infrastructure")</i></p>
SECTION 5 - QUALITY ASSURANCE
<p><b>I. GOVERNMENT CONTRACT QUALITY ASSURANCE REQUIREMENTS</b></p> <p><i>Ref. NPR 8735.2, Management of Government Quality Assurance Functions for NASA Contracts</i></p> <p><input type="checkbox"/> NPR 8735.2 is <b>not</b> applicable to this procurement.</p> <p style="text-align: center;">OR</p> <p><input type="checkbox"/> This procurement is classified as "critical and complex" per NPR 8735.2 and paragraph 2.1 is applicable.</p> <p style="text-align: center;">OR</p> <p><input type="checkbox"/> This procurement is classified as "noncritical or noncomplex" per NPR 8735.2 and paragraph 2.2 is applicable.</p> <p style="text-align: center;">OR</p>

April 20, 2015

**Printed copies are uncontrolled and are not to be used for operational purposes.**

SECTION 5 - QUALITY ASSURANCE (Continued)	
<input type="checkbox"/>	This procurement is for commercial item(s) to be acquired under FAR Part 12 procedures and <a href="#">NPR 8735.2</a> paragraph 2.3 is applicable.
OR	
<input type="checkbox"/>	This procurement is for commercially available off-the-shelf item(s) to be acquired under FAR Part 12 procedures and <a href="#">NPR 8735.2</a> paragraph 2.4 is applicable.
OR	
<input type="checkbox"/>	This procurement is classified as "research and development" and <a href="#">NPR 8735.2</a> paragraph 2.5 is applicable.
<b>II. GOVERNMENT-INDUSTRY DATA EXCHANGE PROGRAM (GIDEP) SCREENING</b>	
<input type="checkbox"/>	This procurement is not for safety critical items as defined in <a href="#">NPR 8735.1</a> .
OR	
<input type="checkbox"/>	This procurement is for safety critical items and has been GIDEP screened as specified in <a href="#">NPR 8735.1</a> .
<i>(Note: GIDEP screening may be requested on any item as desired by the user.)</i>	
<b>III. HIGHER LEVEL QUALITY ASSURANCE REQUIREMENTS</b>	
<input type="checkbox"/>	This procurement is not subject to higher-level quality requirements as specified in FAR 46.202-4 and <a href="#">NPD 8730.5</a> , Attachment A. See <a href="#">NPD 8730.5</a> .
OR	
<input type="checkbox"/>	This procurement is subject to higher-level quality requirements as specified in FAR 46.202-4 and <a href="#">NPD 8730.5</a> , Attachment A. Select the applicable higher-level quality standard:
SECTION 6 - HEALTH and SAFETY	
<b>I. HAZARDOUS SUBSTANCES AND ARTICLES</b>	
<input type="checkbox"/>	This procurement will not result in the acquisition, production, or use of any hazardous or potentially hazardous substances or articles, listed in Appendix D to <a href="#">NPR 1800.1</a> .
OR	
<input type="checkbox"/>	This procurement will result in the acquisition, production, or use of any hazardous or potentially hazardous substances or articles, examples of which are listed in <a href="#">NPR 1800.1</a> , such as:
- Ionizing Radiation Sources and Devices,	
- Lasers and Sources of Hazardous Non-Laser Optical Radiation,	
- High Intensity, Ultraviolet, and Infrared Lights,	
- Radio Frequency (RF) and Microwave Emitters,	
- Devices That Produce Hazardous Noise (Above 80 DBA at 1 Meter or Less),	
- Pyrotechnic Devices and Explosives,	
- Pressurized Vessels,	
- Toxic or Hazardous Substances, Materials or Chemicals,	
- Nano and Ultrafine Particles, or	
- Any Infectious or Biological Agents.	
AND	
<input type="checkbox"/>	The procurement has been reviewed, as required in chapter 4 of <a href="#">NPR 1800.1</a> , to identify risks, controls, alternatives, and safety requirements.
SECTION 7 - CAPITAL EQUIPMENT	
<input type="checkbox"/>	This procurement will not involve the purchase or fabrication of property with unit value > \$100,000, to which the government will take title.
OR	
<input type="checkbox"/>	This procurement will involve the purchase or fabrication of property > \$100,000 per item, either as a line item deliverable or as contractor-acquired property to which the government will receive title. NASA Form 1739, "Alternative Future Use Questionnaire - NASA projects," is attached.
SECTION 8 - REQUIRED SPECIAL APPROVALS, CENTER SPECIFIC SUPPLEMENTS	
<input type="checkbox"/>	There are no items requiring special approval.
OR	
<input type="checkbox"/>	Approvals for special items have been obtained through the established SAP release strategy.
OR	
<input type="checkbox"/>	Approvals for special items are attached.

April 20, 2015

**Printed copies are uncontrolled and are not to be used for operational purposes.**

NF1707, "Special Approvals And Affirmations Of Requisitions"  
- Instructions -

**A. GENERAL INFORMATION**

**Purpose**

NASA Form (NF) 1707, "Special Approvals and Affirmations of Requisitions" is required by the NASA Federal Acquisition Regulation Supplement, section 1804.7301, to document procurement request coordination. The procurement office will not accept a requisition until all required coordinations have been documented.

**When and How to Submit the NF 1707**

The procurement request (PR) is known as a "purchase requisition" (requisition) and is developed in NASA's Integrated Enterprise Management Program/Core Financial Module (CF). In order for a requisition to be sent forward for action, CF requires that several coordinations be obtained first. However, there are additional required coordinations at the Agency level and sometimes at the Center level. The initiator of the requisition is responsible for obtaining those additional coordinations. This form must be used to document additional coordinations. The completed NF 1707 and any additional special approvals or affirmations required must be electronically attached to the requisition in CF and must include the name of the approver and date approved. The contracting officer must include a hard copy in the contract file, or a link to the electronic copy. The procurement office must not accept a requisition until all required coordinations have been documented. The NF 1707 is not required for within scope actions for which special approvals and affirmations have previously been obtained. In addition, the NF 1707 is not required for grants, cooperative agreements, and space act agreements.

**Who Completes the Form**

The initiator of the requisition signs the form affirming that the coordinations have been completed.

**B. DETAILED INSTRUCTIONS**

**Section 1. INFORMATION SYSTEMS AND ELECTRONIC AND INFORMATION TECHNOLOGY ACCESSIBILITY**

There are four subsections. In the first subsection, the requestor must check the appropriate block to indicate if the procurement is for information systems or services involving information systems. If it is, the cognizant CIO will determine if the purchase has a System Security Plan (SSP) that includes a FIPS-199 for a moderate- or high-impact information system, as defined by the National Institute of Standard and Technology (NIST). The CIO may check the box recommending the appropriate NFS security clauses based on the level of access the contractor will have to the system and the SSP requirements.

In the second subsection, INTERNET PROTOCOL VERSION SIX (IPv6), the requestor must check the appropriate block to indicate if the procurement is for information technology using Internet Protocol. If so, the requestor must indicate the requirements documents include the appropriate technical capabilities defined in the USGv6 Profile, or that the CIO has waived it and a copy of the waiver is attached.

In the third subsection, the requestor must check the appropriate block to indicate if the procurement is for software and/or maintenance acquisition. The requestor must indicate coordination with the Center CIO and the ELMT Program Office on the acquisition and authorization to acquire any software licenses or software maintenance outside of the ELMT program, if applicable.

In the fourth subsection the requestor must check the appropriate block to indicate if the PR is for electronic and information technology (EIT) items. If the PR is to acquire EIT, the requestor must check the appropriate boxes to indicate if the item meets accessibility standards. If an accessible item is not available, or if the item is exempt from the standards, additional documentation is required.

**Section 2 Environmental**

The requestor must search a Governmentwide website of environmental programs to determine if one or more of these program requirements apply to the procurement, if the procurement acquires the product directly or if a contractor will acquire the product in performance of the contract. If the product will be procured, the requestor must indicate if the procurement specification includes the environmentally preferred product or if a waiver or other required documentation is attached.

**Section 3 Service Contracting**

If the procurement is to acquire services, the requestor must check the appropriate boxes to indicate the services will comply with Federal requirements.

**Section 4 Technical Approval**

There are two subsections to this section. For both subsections, the requestor must coordinate with the program or project technical authority. For the first subsection, if the PR is for space flight or ground support programs, the requestor must check the appropriate box to affirm that the most recent specifications are cited or a waiver is attached. For the second subsection, the requestor must check the appropriate box to indicate if the PR is related to space communication and navigation capabilities. If it is, then the requestor must affirm the PR has been coordinated with SOMD.

**Section 5 Quality Assurance**

There are three subsections to this section. In the first section, the requestor must indicate which quality assurance requirements, as listed in [NPR 8735.2](#), apply. In the second section, if the PR acquires a safety critical item, the requestor must indicate that the item has been screened as required by [NPR 8735.1](#). In the third section, the requestor must indicate if the PR is for items requiring higher level quality assurance. For items requiring higher level quality assurance, the requestor must specify which higher level quality assurance standard applies.

**Section 6 Health and Safety**

The requestor must indicate if the PR is to acquire hazardous or potentially hazardous substances or articles, as defined in [NPR 1800.1](#). If the PR is for hazardous or potentially hazardous substances or articles, the requestor must affirm that it has been screened in accordance with [NPR 1800.1](#).

**Section 7 Capital Equipment**

The requestor must indicate if the PR is to acquire capital equipment. If the PR is to acquire capital equipment, then the requestor must check the appropriate box and attach NF 1739.

**Section 8 Required Special Approvals, Center Specific Supplements**

This section is designed to allow for center-specific or special approvals added by the center. Follow center policy when completing this section.

April 20, 2015

Printed copies are uncontrolled and are not to be used for operational purposes.

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

**APPENDIX D.—APPLICABILITY OF FEDERAL ACQUISITION REGULATION (FAR) PART 23  
RECOVERED MATERIALS, BIOBASED PRODUCTS, AND WASTE-REDUCTION CLAUSES,  
AND RELATED GLENN SUPPLEMENTAL REQUIREMENTS**

If a statement of work (SOW) describes a requirement that is under \$100K and is either for, or specifies the use of, Environmental Protection Agency- (EPA-) designated products containing recovered materials, any resultant solicitation must include Federal Acquisition Regulations (FAR) provision 52.223–4, Recovered Material Certification.

If an SOW describes a requirement that is over \$100K and is either for, or specifies the use of, EPA-designated products containing recovered materials, any resultant solicitation and contract must include the following:

1. FAR provision 52.223–4, Recovered Material Certification
2. FAR clause 52.223–9, Estimate of Percentage of Recovered Material content for EPA-Designated Products (with Alt. I if the technical personnel advise that estimates can be verified)
3. Applicability of FAR Part 23 Recovered Materials, Biobased Products, and Waste Reduction Clauses, and related Glenn Supplemental Requirements (GSRs)

**D.1 Recovered Material Reporting**

Each contractor shall submit a report estimating the percentage of the total recovered material used in the contract performance, including, if applicable, the percentage of postconsumer material content. The reporting period shall be from October 1 of each year through September 30 of the following year. The report shall be submitted by December 31. This report shall be submitted to the address listed at [NETS](#). The report will be provided to the contracting officer and the NASA Glenn Research Center (GRC) Environmental Management Branch (EMB). A complete listing of all categories and products that the EPA has designated as having to meet recycled or reclaimed percentages is provided on their [CPG products Web site](#).

If an SOW describes a requirement that is for (1) support services at Government-owned or –leased facilities or (2) contractor operation of Government-owned or -leases facilities, any resultant solicitation and contract must include the following:

1. FAR clause 52.223-10, Waste Reduction Program
2. Applicability of FAR Part 23 Recovered Materials, Biobased Products, and Waste Reduction Clauses, and related GSRs

**D.2 Waste-Reduction Reporting**

The contractor shall submit a report for all operations and facilities covered by this contract about its program to promote and implement cost-effective waste-reduction and affirmative procurement programs required by 42 U.S. Code (U.S.C.) 6962 for all products designated in EPA’s 40 Code of Federal Regulations (CFR) [247](#), Comprehensive Procurement Guideline for Products Containing Recovered Materials. Both FAR 23.404(b) and NASA Policy Guideline (NPG) 8830.01 require that Government purchases of EPA-designated items contain the specified amount of recovered materials unless a request for waiver ([GRC138](#)) or justification documentation has been processed. The reporting period shall be from October 1 of each year through September 30 of the following year. The report shall be submitted in time to be received by December 15. This report shall be submitted at the address listed at [NETS](#). The report will be provided to the contracting officer (CO) and GRC’s EMB. The contractor’s programs shall comply with applicable Federal, State, and local requirements, NASA environmental policy, and the GRC Environmental Program Manual, specifically including Section 6002 of the Resource Conservation and Recovery Act (42 U.S.C. 6962, et seq.) and implementing regulations (40 CFR [247](#)). A complete listing of all categories and products designated in EPA’s 40 CFR [247](#) can be found at their [CPG products Web site](#).

If a SOW describes a requirement that either requires the delivery or specifies the use of, USDA-designated biobased items, any resultant solicitation must include FAR provision 52.223-1, Biobased Product Certification.

If a SOW describes a service or construction requirement that either involves, or may involve, the use of USDA-designated biobased items, any resultant solicitation and contract must include the following:

1. FAR provision 52.223-1, Biobased (Biopreferred) Product Certification

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

2. FAR clause 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts
3. Applicability of FAR Part 23 Recovered Materials, Biobased Products, and Waste Reduction Clauses, and related GSRs

The contractor shall submit a report for all operations and facilities covered by this contract about its program to promote and implement cost-effective waste-reduction and affirmative procurement programs required by 42 U.S.C. 6962 for all products designated in United States Department of Agriculture (USDA) biopreferred Procurement Guidelines (7 CFR 2902, subpart B). The reporting period shall be from October 1 of each year through September 30 of the following year. The report shall be submitted in time to be received by December 15. This report shall be submitted at the address listed at [NETS](#). The report will be provided to the CO and GRC's EMB. The contractor's programs shall comply with applicable Federal, State, and local requirements, NASA environmental policy, and GRC's Environmental Program Manual, specifically including Section 6002 of 42 U.S.C. 6962, et seq., the Resource Conservation and Recovery Act; 7 U.S.C. 8102, the Farm Security and Rural Investment Act of 2002; and implementing regulations (40 CFR [247](#)). See the [complete listing of all categories and products](#) designated in USDA's BioPreferred<sup>SM</sup> procurement guidelines.

If a SOW describes a requirement that is for (1) support services at Government-owned or -leased facilities or (2) contractor operation of Government-owned or -leased facilities, any resultant solicitation and contract must include the following:

1. FAR clause 52.223-10, Waste Reduction Program
2. FAR 23.203, Energy Product Reporting, including cost-effectiveness, as described in NPR [8570.1](#), Energy Efficiency and Water Conservation Technologies and Practices

The contractor shall submit a report for all operations and facilities covered by this contract about its program to promote and implement cost-effective waste reduction and energy-efficiency and water-conservation technologies and practices. Executive Order [13423](#), Strengthening Federal Environmental, Energy and Transportation Management, requires Federal agencies (1) to ensure that electronic products being acquired meet its requirements and that at least 95 percent of those requirements are met with an EPEAT-registered electronic product, unless there is no EPEAT standard for such product, and (2) to require agencies to use of sustainable environmental practices, including the acquisition of biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products in their acquisitions of goods and services. The reporting period shall be from October 1 of each year through September 30 of the following year. The report shall be submitted in time to be received by December 15. This report shall be submitted to the address listed at [NETS](#). The report will be provided to the CO and GRC's EMB. The contractor's programs shall comply with applicable Federal, State, and local requirements, NASA environmental policy, and GRC's Environmental Program Manual, specifically including Section 6002 of 42 U.S.C. 6962, et seq., the Resource Conservation and Recovery Act. A complete listing of all categories and products designated in USDA's BioPreferred<sup>SM</sup> procurement guideline can be found at the [BioPreferred Web site](#).

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

**APPENDIX E.—FEDERAL ACQUISITION REGULATION (FAR)  
GREEN PURCHASING REQUIREMENTS**

<b>FAR parts</b>	<b>Summary</b>
<b>Part 2</b>	Contains definitions for biobased, energy efficient, energy-efficient standby power device, environmentally preferable, ozone-depleting substances, and recovered materials
<b>Part 7</b>	Requires agency planners to consider energy-efficient products and services, products containing energy-efficient standby power devices, products containing recovered materials, biobased products, and environmentally preferable products and services
<b>Part 11</b>	Requires agencies to consider the maximum practicable use of energy and waste; low standby power; and biobased, recycled content, and environmentally preferable products and services when developing, reviewing, or revising specifications, product descriptions (including commercial item descriptions), and standards; when describing Government requirements for supplies and services; and when developing source-selection factors  Requires that high-speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, white woven envelopes, writing and office paper, book paper, cotton-fiber paper, and cover stock contain no less than 50-percent postconsumer materials  May require offerors to submit additional information on the recycled or biobased content or related standards; may require vendors for biobased products to provide information on life-cycle costs and environmental and health benefits
<b>Part 12</b>	Provides for the use of provisions and clauses contained in Part 23 regarding the use of recovered material and biobased products when appropriate for the commercial item being acquired
<b>Part 13</b>	Applies procurement requirements in Subparts 23.2, 23.4, and 23.7 to purchases at or below the micropurchase threshold
<b>Part 23</b>	States that agencies shall assure the use of products containing recovered materials and biobased products to the maximum extent practicable without jeopardizing the intended use of the product and while maintaining a satisfactory level of competition at a reasonable price; requires that Federal agencies purchase ENERGY STAR® or Federal Energy Management Program- (FEMP-) designated products and, for products that consume power in a standby mode, those that are on FEMP's Low Standby Power Devices product listing; and states that agencies must maximize the utilization of environmentally preferable products and services, and must give preference to the procurement of alternative products that reduce overall risks to human health and the environment by lessening the depletion of ozone
<b>Part 36</b>	Requires that agencies comply with the requirements of FAR Subpart 23.2 when drafting facility design solicitations and contracts that include the specifications of energy-consuming products
<b>Part 42</b>	Requires the Government to monitor contractor compliance with specifications or other contractual requirements requiring the delivery or use of environmentally preferable products, energy-efficient products, products containing recovered materials, and biobased products

**Printed copies are uncontrolled and are not to be used for operational purposes.**

<b>Glenn Research Center Environmental Programs Manual</b>	<b>Title:</b> Green Procurement: Affirmative Procurement, Biopreferable Products, and Environmentally Preferable Products	
	<b>Document No.:</b> GLM-FE-8500.1-9	<b>Rev.:</b> A

FAR clauses	Summary
	<p><b>Affirmative procurement</b></p> <p><b>52.223-1</b> Biobased Product Certification</p> <p><b>52.223-2</b> Affirmative Procurement of Biobased Products Under Service and Construction Contracts</p> <p><b>52.223-4</b> Recovered Materials Certification</p> <p><b>52.223-9</b> Estimate of Percentage of Recovered Material Content for EPA Designated Products (use only on contracts exceeding \$100,000)</p> <p><b>52.223-11</b> Ozone-Depleting Substances</p> <p><b>52.223-12</b> Refrigeration Equipment and Air Conditioners</p> <p><b>52.223-15</b> Energy Efficiency in Energy-Consuming Products</p> <p><b>52.223-16</b> IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products (EPEAT Standard)</p> <p><b>Recycled-content paper</b></p> <p><b>52.204-4</b> Printed or Copied Double-Sided on Recycled Paper</p> <p><b>Support services and operations and maintenance contractors</b></p> <p><b>52.223-10</b> Waste Reduction Program</p>

**Printed copies are uncontrolled and are not to be used for operational purposes.**