FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT

U. S. Department of Energy

Idaho Operations Office

State Energy Efficient Appliance Rebate Program (SEEARP)

American Recovery and Reinvestment Act (ARRA)

Funding Opportunity Number: DE-FOA-0000119

Announcement Type: Initial

CFDA Number: 81.127, Energy Efficient Appliance Rebate Program (EEARP)

Issue Date:	**07/14/2009**
Initial Application Due Date:	**08/15/2009 at 8:00:00 PM Eastern Time**
Comprehensive Application Due Date:	**10/15/2009 at 8:00:00 PM Eastern Time**

NOTE: REGISTRATION REQUIREMENTS

Registration Requirements
There are several one-time actions you must complete in order to submit an application in response to this Announcement (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contractor Registration (CCR), and register with FedConnect). Applicants who are not registered with CCR and FedConnect should allow at least 10 days to complete these requirements. It is suggested that the process be started as soon as possible.

Applicants must obtain a DUNS number. DUNS website: http://www.dnb.com/US/duns_update/

Applicants must register with the CCR. CCR website: http://www.ccr.gov/

Applicants must register with FedConnect to submit their application. FedConnect website: www.fedconnect.net

Questions
Questions relating to the **system requirements or to how an application form works** must be directed to Grants.gov at 1-800-518-4726 or **support@grants.gov**.

Questions regarding the **content** of the announcement must be submitted through the FedConnect portal. You must register with FedConnect to respond as an interested party to submit questions, and to view responses to questions. It is recommended that you register as soon after release of the FOA as possible to have the benefit of all responses. More information is available at **http://www.compusearch.com/products/fedconnect/fedconnect.asp**. DOE/NNSA will try to respond to a question within three business days, unless a similar question and answer have already been posted on the website.

Questions pertaining to the **submission** of applications through FedConnect should be directed by e-mail to support@FedConnect.net or by phone to FedConnect Support at 800-899-6665.

Comprehensive Application Preparation and Submission

Applicants must download the application package, application forms and instructions, from Grants.gov. Grants.gov website: http://www.grants.gov/
(Additional instructions are provided in Part IV A of this FOA.)

Applicants must submit their application through the FedConnect portal. FedConnect website: www.fedconnect.net
(Additional instructions are provided in Part IV H of this FOA.)

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PART I – FUNDING OPPORTUNITY DESCRIPTION

Purpose

State Energy Efficient Appliance Rebate Program: The purpose of this Funding Opportunity Announcement (FOA) is to award formula grants to U.S. states, territories, and the District of Columbia (hereinafter referred to as States) to provide American Recovery and Reinvestment Act funding for the establishment and administration of State Appliance Rebate Programs.

This FOA is issued by the U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy (EERE), with administrative assistance by the DOE Idaho Operations Office.

Background

Projects under this FOA will be funded, in whole or in part, with funds appropriated by the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, (ARRA or Recovery Act or Act). The Recovery Act's objectives are:

- Spur economic growth and create jobs
- Save energy and reduce greenhouse gas emissions
- Ensure transparency and accountability of Recovery Act funds

Be advised that special terms and conditions may apply to projects funded by the Act relating to:

- Reporting, tracking and segregation of incurred costs;
- Reporting on job creation and preservation;
- Publication of information on the Internet;
- Access to records by Inspectors General and the Government Accountability Office;
- Prohibition on use of funds for gambling establishments, aquariums, zoos, golf courses or swimming pools;
- Ensuring wage rates are comparable to those prevailing on projects of a similar character;
- Protecting whistleblowers and requiring prompt referral of evidence of a false claim to an appropriate inspector general; and
- Certification and Registration.

These special terms and conditions will be based on provisions included in Titles XV and XVI of the Act. The exact terms and conditions will be provided as soon as available.

The Office of Management and Budget (OMB) has issued Initial Implementing Guidance for the Recovery Act. See M-09-10, Initial Implementing Guidance for the American Recovery and Reinvestment Act of 2009, . OMB will be issuing additional guidance concerning the Act in the near future. Applicants should consult the DOE website, www.energy.gov, the OMB website http://www.whitehouse.gov/omb/, and the Recovery website, www.recovery.gov regularly to keep abreast of guidance and information as it evolves.

Recipients of funding appropriated by the Act shall comply with requirements of applicable Federal, State, and local laws, regulations, DOE policy and guidance, and instructions in this FOA, unless relief has been granted by DOE. Recipients shall flow down the requirements of applicable Federal, State and local laws, regulations, DOE policy and guidance, and instructions in this FOA to subrecipients at any tier to the extent necessary to ensure the recipient's compliance with the requirements.

Be advised that Recovery Act funds can be used in conjunction with other funding as necessary to complete projects, but tracking and reporting must be separate to meet the reporting requirements of the Recovery Act and related OMB Guidance. Applicants for projects funded by sources other than the Recovery Act should plan to keep separate records for Recovery Act funds and ensure those records

comply with the requirements of the Act. Funding provided through the Recovery Act that is supplemental to an existing grant is one-time funding.

Applicants should begin planning activities for their first tier subawardees, including obtaining a DUNS number (or updating the existing DUNS record) and registering with the Central Contractor Registration (CCR).

ARRA was enacted to preserve and create jobs and promote economic recovery; to assist those most impacted by the recession; to provide investments needed to increase economic efficiency by spurring technological advances in science and health; to invest in transportation, environmental protection, and other infrastructure that will provide long-term economic benefits; and to stabilize state and local government budgets in order to minimize and avoid reductions in essential services and counterproductive state and local tax increases.

Description

The Recovery Act provides $296M to implement Section 124 of the Energy Policy Act of 2005 (EPAct 2005) establishing DOE support for States rebate programs for residential ENERGY STAR appliance products (those that represent improvements in efficiency compared to the majority of products in the market). States will receive formula-based funding to establish or supplement established ENERGY STAR appliance rebate programs. Federal funds, awarded from this FOA, may be used to pay up to 50% of the administrative costs to carry out the rebate program.

The Appliance Rebate Program Objectives are:

- Save energy by encouraging appliance replacement through consumer rebates
- Make rebates available to consumers
- Enhance existing rebate programs by leveraging ENERGY STAR national partner relationships and local program infrastructure
- Keep administrative costs low while adhering to monitoring and evaluation requirements
- Promote state and national tracking and accountability
- Use existing ENERGY STAR consumer education and outreach materials

Key Implementation Elements

Funding Schedule: The U.S. Department of Energy (DOE), through the Idaho Operations Office, will make funds available to States to implement the State Energy Efficiency Appliance Rebate Program. Immediately, and not later than thirty days following the issuance of the Funding Opportunity Announcement, States shall submit their initial application, which will indicate their intent to participate in the program. This initial application, once received, will initiate the award for 10% of the State's allotment, based on 100% participation. Once the thirty-day period for declaration of intent to participate has closed, States are requested to immediately and not later than have sixty days, submit completed plans for DOE review. Upon approval of a full application, States will receive the remaining 90% of their allotment.

Funds are based on the statutory formula of each State's population compared to the U.S. population. States will each use their allocation to pay for the full cost of all product rebates and up to 50% of the administrative costs to carry out the rebate program.

Awards will be approved on a rolling basis upon submittal of States' proposed rebate plans, for which the final deadline is October 15, 2009. The proposed target date for program start is Fall, 2009. States may begin any time after the official start date. Funds must be expended by February 2012 (three years following enactment of the Recovery Act).

Program Plans: States may apply for rebate funds by submitting for review a program plan that they believe meets their needs in terms of economic benefits, energy savings, and consideration for existing

rebate programs within the States. Priorities for implementing a program should be speed of implementation, low administrative costs, economic stimulus, maximum consumer financial benefit, and fraud prevention. State Energy Offices shall design their programs taking into consideration:

1. Its allocation amount
2. The amount of any other applicable federal or state tax or rebate incentives available for the purchase of similar appliances
3. The incremental cost for the average ENERGY STAR appliance compared to the same appliance that is not ENERGY STAR qualified
4. Current ENERGY STAR market share
5. Regional and state-specific issues.

DOE will make resources available to each States Energy Office so that energy officers can design a rebate program, submit a thorough application, and minimize administrative costs. The program plan submitted by the States must address each of the points listed below:

Budget: The rebate program plan must include a budget that outlines disbursement of consumer rebates (by product type) and administrative costs. Examples of administrative costs include those for designing programs, disbursing funds, conducting outreach, and monitoring. Direct recycling costs shall not be included as part of administrative costs, but costs to administer recycling may be included. Each program design application should clearly delineate the activities it proposes to fund, keeping in mind the overall goal of the program to provide rebates to consumers. States are advised to minimize administrative costs and maximize rebates to consumers, while ensuring the transparency and accountability of Recovery Act funds. States are further advised to keep administrative costs within ten to twenty-five percent of total program costs; any deviation from this target should be fully explained in the program plan.

Covered Products: States shall specify which of the qualified ENERGY STAR appliance categories will be included in their rebate program. DOE recommends that States' programs include those residential ENERGY STAR appliances that offer the greatest potential energy savings and that are commonly included in existing utility or state consumer rebate programs. The tables in the accompanying Appendices A and B contain information about energy consumption in the home as well as the potential energy savings and market share of commonly rebated products. A list of ENERGY STAR products covered by federal minimum efficiency standards is provided in Appendix C. The information in these Appendices is meant to serve as reference for States to select which appliances to cover.

More specifically, DOE recommends States select from among the following residential ENERGY STAR qualified appliance categories:

- Boilers
- Central air conditioners
- Clothes washers
- Dishwashers
- Freezers
- Furnaces (oil and gas)
- Heat pumps (air source and geothermal)
- Refrigerators
- Room air conditioners
- Water heaters.

An appliance is generally understood as a product that consumes energy. This Recovery Act provision seeks to target residential appliances, rather than consumer electronics or elements of the building envelope. States that seek to offer consumer rebates to other ENERGY STAR appliance or product categories not listed above should provide thorough justification for their selection. Options beyond the list

above, including those residential appliances with improved efficiency in cold climates, will be considered on a case-by-case basis.

Rebate Levels: States shall specify the rebate amounts that will be provided for each product type. When setting levels, States must take into account existing state or federal tax credits, as well as any States or utility rebates. In addition, the price differential between the respective ENERGY STAR qualified product and its non-ENERGY STAR qualified counterpart should be considered. Information on representative rebate levels, current federal tax credits, and average incremental costs is included in Appendix B.

States may choose to set higher rebate levels for models with higher efficiency levels or to direct their funds only to higher efficiency models. If "tiering" rebates, States should consider the impact on energy savings as well as on the resulting administrative costs.

States shall provide in their program plans a summary of all existing States and utility incentives that will be available for each product, and explain how their proposed rebate levels will complement these baseline efforts. While it is acceptable to supplement existing States' programs, the Recovery Act rebate funds may not be used to supplant existing program funding.

Rebate Processing: States must specify how the rebate payments will be processed (e.g., mail-in application forms, instant rebates at point of sale). States must also describe who will be responsible for managing the program delivery (e.g., state, a contracted third party, utilities, other organizations, or a combination). States are encouraged to pursue program delivery models that require low administrative costs. States must report on the progress of the rebate fulfillment and results from program implementation. Program plans should explain the steps States will take to manage consumer expectations regarding the availability of rebate funds, e.g., use of appropriate disclaimers on program materials and prompt announcements when funds are nearly depleted.

Replacement: States should specify how they are including replacements in their programs. Product recycling is encouraged and States are encouraged to work with retailers, utilities, municipalities, steel recyclers, and others to develop appropriate, low-cost systems. The replacement program is particularly relevant for refrigerators, freezers, and room air conditioners. Appendix D provides information about designing a recycling program.

PART II – AWARD INFORMATION

A. TYPE OF AWARD INSTRUMENT

DOE anticipates awarding grants under this program announcement.

B. ESTIMATED FUNDING

Approximately $296 Million is expected to be available for new awards under this announcement.

Funding allocations consist of Federal funds appropriated with the American Recovery and Reinvestment Act (ARRA). Specific funding for each award will be determined and allocated by statutory formula. States allocations are listed within Attachment 3.

C. EXPECTED NUMBER OF AWARDS

DOE anticipates making approximately 56 grant awards under this announcement.

D. PERIOD OF PERFORMANCE

DOE anticipates making awards that commence at the time of award and continue through 02/17/2012. Applicants must ensure that all funds are exhausted for authorized activities by this date.

E. TYPE OF APPLICATION

DOE will accept only new applications under this announcement.

PART III - ELIGIBILITY INFORMATION

ELIGIBLE APPLICANTS

In accordance with Section 124 of EPAct 2005, eligibility for award is restricted to U.S. states, territories, and the District of Columbia (referred to as States in this document) applying for formula grant financial assistance under the Department of Energy's (DOE's) State Energy Efficient Appliance Rebate Program.

COST SHARING

Funds are based on the statutory formula of the States population compared to the U.S. population. States will use their allocation to pay for the full cost of all product rebates and up to 50% of the administrative costs to carry out the rebate program. As such, States will be responsible for at least 50% of their individual program administrative costs.

PART IV – APPLICATION AND SUBMISSION INFORMATION

A. INITIAL APPLICATION

Initial Application Package includes a Standard Form 424. **The Initial Application shall be submitted to the following email address: recovery@id.doe.gov no later than August 15, 2009.**

1. SF 424 – Application for Federal Assistance

Applicants must complete the Standard Form 424 (SF 424). Complete all required fields in accordance with the instructions on the form. The list of certifications and assurances referenced in Field 21 can be found on the DOE Financial Assistance Forms Page at http://management.energy.gov/business_doe/business_forms.htm under Certifications and Assurances. The SF 424 can be downloaded from http://www.netl.doe.gov/business/forms.html#FUNDING.

PLEASE NOTE: By submitting the SF 424, Applicants are providing their written assurance that they will comply with ALL requirements set forth in the American Recovery and Reinvestment Act.

B. ADDRESS TO REQUEST COMPREHENSIVE APPLICATION PACKAGE

The Comprehensive Application shall be submitted no later than October 15, 2009.

Application forms and instructions are available at Grants.gov. To access these materials, go to http://www.grants.gov, select "Apply for Grants," and then select "Download Application Package." Enter the Catalog of Federal Domestic Assistance (CFDA) number and/or the funding opportunity number located on the cover of this announcement and then follow the prompts to download the application package. Once you have SAVED the application package and completed all the required documentation, you will submit your application via the Fedconnect portal. **DO NOT use the Save & Submit selection in Grants.gov.**

C. CONTENT AND FORM OF COMPREHENSIVE APPLICATION – SF 424

You must complete the mandatory forms and any applicable optional forms (e.g., SF-LLL- Disclosure of Lobbying Activities) in accordance with the instructions on the forms and the additional instructions below. **Files that are attached to the forms must be in Adobe Portable Document Format (PDF) unless otherwise specified in this announcement**.

- **SF 424 - Application for Federal Assistance**
  Complete this form first to populate data in other forms. Complete all required fields in accordance with the pop-up instructions on the form. To activate the instructions, turn on the "Help Mode" (Icon with the pointer and question mark at the top of the form). The list of certifications and assurances referenced in Field 21 can be found on the DOE Financial Assistance Forms Page at http://management.energy.gov/business_doe/business_forms.htm under Certifications and Assurances.

2. Project/Performance Site Location(s)

Indicate the primary site where the work will be performed. If a portion of the project will be performed at any other site(s), identify the site location(s) in the blocks provided.

Note that the Project/Performance Site Congressional District is entered in the format of the 2 digit state code followed by a dash and a 3 digit Congressional district code, for example VA-001. Hover over this field for additional instructions.

Use the Next Site button to expand the form to add additional Project/Performance Site Locations.

3. Other Attachments Form

Submit the following files with your application and attach them to the Other Attachments Form. Click on "Add Mandatory Other Attachment" to attach the Project Narrative. Click on "Add Optional Other Attachment," to attach the other files.

- **Program Plan File – Mandatory Other Attachment**

The Program Plan file describes the States proposed program activities, including the intended scope, milestones, and goals to be attained. The plan should cover activities the States intend to undertake during the full period of the grant (November 2009 – February 2012). This plan must address the key implementation elements noted in Part I.

Save the information in a file named "ProgramPlan.pdf," and click on "Add Mandatory Other Attachment" to attach.

- **SF 424 A Excel, Budget Information – Non-Construction Programs File**

You must provide a cumulative budget for the total project rather than a separate budget for each year. Use the SF 424 A Excel, "Budget Information – Non Construction Programs" form on the DOE Financial Assistance Forms Page at:
http://management.energy.gov/business_doe/business_forms.htm.
You may request funds under any of the Object Class Categories as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allowability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this announcement (See PART IV, G). Save the information in a single file named "SF424A.xls," and click on "Add Optional Other Attachment" to attach.

- **Budget Justification File**

See Part I for limitations regarding administrative costs. You must justify the administrative costs proposed in each Object Class Category or Cost Classification category (e.g., identify key persons and personnel categories and the estimated costs for each person or category; provide a list of equipment and cost of each item; identify proposed subaward or consultant work and cost of each subaward or consultant; describe purpose of proposed travel, number of travelers, and number of travel days; list general categories of supplies and amount for each category; and provide any other information you wish to support your budget). Provide the name of your cognizant or oversight agency, if you have one, and the name and phone number of the individual responsible for negotiating your indirect rates. In the budget justification, identify the following information for each third party contributing cost sharing: (1) the name of the organization; (2) the proposed dollar amount to be provided; (3) the amount as a percentage of the total project cost; and (4) the proposed cost sharing – cash, services, or property. By submitting your application, you are providing assurance that you have signed letters of commitment. Successful applicants will be required to submit these signed letters of commitments. Save the budget justification information in a single file named "Budget.pdf," and click on "Add Optional Other Attachment" to attach.

- **Subaward Budget File(s)**

  You must provide a separate budget (i.e., budget for each budget year and a cumulative budget) for each subawardee that is expected to perform work estimated to be more than 25 percent of the total work effort. Use the SF 424 A Excel for Non Construction Programs or the SF 424 C Excel for Construction Programs. These forms are found on the DOE Financial Assistance Forms Page at http://management.energy.gov/business_doe/business_forms.htm. Save each Subaward budget in a separate file. Use up to 10 letters of the subawardee's name (plus .xls) as the file name (e.g., ucla.xls or energyres.xls), and click on "Add Optional Other Attachment" to attach.

- **NEPA**

  All Projects receiving financial assistance from DOE must be reviewed under the National Environmental Policy Act (NEPA) of 1969 – 42 U.S.C. Section 4321 et seq. The first step in DOE's NEPA review process requires financial assistance recipients to submit information to DOE regarding the potential environmental impacts of the project receiving DOE funds. Applicants must complete the Environmental Checklist (ID-EC98.1) included as Attachment 4.

3. **SF-LLL Disclosure of Lobbying Activities**
   If applicable, complete SF- LLL. Applicability: If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the grant/cooperative agreement, you must complete and submit Standard Form – LLL, "Disclosure Form to Report Lobbying."

Summary of Required Forms/Files

Your application must include the following documents:

Name of Document	Format	File Name
Application for Federal Assistance – SF424	Form	N/A
Project Performance Site Locations	Form	N/A
Other Attachments Form: Attach the following files to this form:	Form	N/A
Program Plan	PDF	ProgramPlan.pdf
SF 424A File – Budget Information for Non-Construction Programs	Excel	SF424A.xls
Budget Justification File	PDF	Budget.pdf
Subaward Budget File(s) *Optional*	Excel	See Instructions
SF-LLL Disclosure of Lobbying Activities, if applicable.	Form	N/A
Applicant Environmental Checklist	Form	Environmental.pdf

D. SUBMISSIONS FROM SUCCESSFUL APPLICANTS

If selected for award, DOE reserves the right to request additional or clarifying information for any reason deemed necessary, including, but not limited to:

- Indirect cost information
- Other budget information
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5)

E. SUBMISSION DATES AND TIMES

1. Initial-application Due Date

Initial-applications are encouraged to be submitted immediately after release of this funding announcement and must be received by 08/15/2009, not later than 8:00 PM Eastern Time.

- **Comprehensive Application Due Date**

Comprehensive applications are encouraged to be submitted as soon as possible between the dates of 8/16/2009 and 10/15/2009, not later than 8:00 PM Eastern Time.

F. INTERGOVERNMENTAL REVIEW

This program is subject to Executive Order 12372 (Intergovernmental Review of Federal Programs) and the regulations at 10 CFR Part 1005.

One of the objectives of the Executive Order is to foster an intergovernmental partnership and a strengthened federalism. The Executive Order relies on processes developed by state and local governments for coordination and review of proposed Federal financial assistance.

Applicants should contact the appropriate State Single Point of Contact (SPOC) to find out about, and to comply with, the state's process under Executive Order 12372. The names and addresses of the SPOCs are listed on the Web site of the Office of Management and Budget at http://www.whitehouse.gov/omb/grants/spoc.html.

G. FUNDING RESTRICTIONS

Cost Principles: Costs must be allowable in accordance with the applicable Federal cost principles referenced in 10 CFR Part 600. The cost principles for commercial organizations are in FAR Part 31.

H. OTHER SUBMISSION AND REGISTRATION REQUIREMENTS

1. Where to Submit

Initial Application: The Initial Application is to be submitted to the following email address: recovery@id.doe.gov no later than August 15, 2009.

Comprehensive Application: MUST BE SUBMITTED THROUGH FEDCONNECT TO BE CONSIDERED FOR AWARD. Submit electronic applications through the FedConnect portal at: www.fedconnect.net by no later than October 15, 2009. Information regarding how to submit applications via Fed Connect can be found at: https://www.fedconnect.net/FedConnect/PublicPages/FedConnect_Ready_Set_Go.pdf Further, it is the responsibility of the applicant, prior to the offer due date and time, to verify successful transmission.

2. Registration Process

There are several one-time actions you must complete in order to submit an application in response to this Announcement (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), and register with FedConnect). Applicants, who are not registered with CCR and FedConnect, should allow at least 10 days to complete these requirements. It is suggested that the process be started as soon as possible.

Part V - APPLICATION REVIEW INFORMATION

A. REVIEW AND AWARD PROCESS

DOE will review applications and make awards under this funding opportunity in accordance with the final 2009 American Recovery and Reinvestment Act (ARRA) allocations as outlined in Attachment 3 to this announcement.

DOE will make an initial award to each selected applicant based on the Initial Application (see Part IV above).

DOE will issue a modification to the award after review and approval of the States Plan submitted as part of the Comprehensive Application. DOE will review the Comprehensive Application for completeness and complete a Technical Review to evaluate the approach outlined by the applicant. The award modification will obligate the remaining balance of the allocated funding for the States.

Part VI - AWARD ADMINISTRATION INFORMATION

A. AWARD NOTICES

1. Notice of Award

A Notice of Financial Assistance Award or Assistance Agreement issued by the contracting officer is the authorizing award document. It normally includes either as an attachment or by reference: (1). Special Terms and Conditions; (2). Applicable program regulations, if any; (3). Application as approved by DOE; (4). DOE assistance regulations at 10 CFR Part 600; (5). National Policy Assurances to Be Incorporated As Award Terms; (6). Budget Summary; and (7). Federal Assistance Reporting Checklist, which identifies the reporting requirements.

B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS

1. Administrative Requirements

The administrative requirements for DOE grants and cooperative agreements are contained in 10 CFR Part 600. (See: http://ecfr.gpoaccess.gov).

ARRA 2009 Award Administration Information
Special Provisions relating to work funded under American Recovery and Reinvestment Act of 2009, Pub. L. 111-5 shall apply. Also, the Office of Management and Budget may be promulgating additional provisions or modifying existing provisions. Those additions and modifications will be incorporated into the Special Provisions as they become available. A draft of these Special Provisions is located at http://management.energy.gov/business_doe/business_forms.htm

2. Special Terms and Conditions and National Policy Requirements

A sample Special Terms and Conditions document, which reflects the expected terms of these awards, has been included as Attachment 1 to this announcement.
The National Policy Assurances to be Incorporated as Award Terms are located at DOE http://management.energy.gov/business_doe/business_forms.htm.

3. Intellectual Property Provisions

The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at http://www.gc.doe.gov/financial_assistance_awards.htm. It is anticipated that the applicable provision will be NRD-1003 and all recipients under this program would be subject to the intellectual property requirements at 10 CFR 600.136(a) and (c)

C. REPORTING

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2. A sample checklist is included as Attachment 2 to this announcement. Financial and progress reports will be used to adhere to the transparency and oversight requirements detailed in the Recovery Act and posted on http://www.recovery.gov. Please note that the due date of certain reports may change.

PART VII - QUESTIONS/AGENCY CONTACTS

A. QUESTIONS

Questions regarding the content of the announcement must be submitted through the FedConnect portal. You must register with FedConnect to respond as an interested party to submit questions, and to view responses to questions. It is recommended that you register as soon after release of the FOA as possible to have the benefit of all responses. More information is available at http://www.compusearch.com/products/fedconnect/fedconnect.asp. DOE will try to respond to a question within three (3) business days, unless a similar question and answer have already been posted on the website.

B. AGENCY CONTACT

Name:	Jeffrey C. Fogg
E-mail:	foggjc@id.doe.gov
Telephone:	(208) 526-4958
FAX:	(208) 526-5548

PART VIII - OTHER INFORMATION

A. MODIFICATIONS

Notices of any modifications to this announcement will be posted on Grants.gov and the FedConnect portal. You can receive an email when a modification or an announcement message is posted by registering with FedConnect as an interested party for this FOA. It is recommended that you register as soon after release of the FOA as possible to ensure you receive timely notice of any modifications or other announcements. More information is available at http://www.fedconnect.net and http://www.compusearch.com/products/fedconnect.asp.

B. GOVERNMENT RIGHT TO REJECT OR NEGOTIATE

DOE reserves the right, without qualification, to reject any or all applications received in response to this announcement and to select any application, in whole or in part, as a basis for negotiation or award.

C. COMMITMENT OF PUBLIC FUNDS

The Contracting Officer is the only individual who can make awards or commit the Government to the expenditure of public funds. A commitment by other than the Contracting Officer, either explicit or implied, is invalid.

Part IX – APPENDICES/REFERENCE MATERIAL

- Attachment 1, Sample Special Terms and Conditions
- Attachment 2, Sample Reporting Requirements Checklist
- Attachment 3, States Allocations
- Attachment 4, Environmental Checklist

Informational Appendices

- Appendix A, Residential Energy Consumption Data
- Appendix B, Market and Energy Data for Commonly Rebated Energy Star Products
- Appendix C, Energy Star Products Covered Under the Department of Energy's Appliance Standards Program
- Appendix D, Appliance Recycling Program Design Considerations

Attachment 1
Sample

Special Terms and Conditions
Grants and Cooperative Agreements

FA-TC-0001A RESOLUTION OF CONFLICTING CONDITIONS

Any apparent inconsistency between Federal statutes and regulations and the terms and conditions contained in this award must be referred to the DOE Award Administrator for guidance.

FA-TC-0003.1 PAYMENT PROCEDURES – ADVANCES THROUGH THE AUTOMATED STANDARD APPLICATION FOR PAYMENTS (ASAP) SYSTEM

a. Method of Payment. Payment will be made by advances through the Department of Treasury's ASAP system.

b. Requesting Advances. Requests for advances must be made through the ASAP system. You may submit requests as frequently as required to meet your needs to disburse funds for the Federal share of project costs. If feasible, you should time each request so that you receive payment on the same day that you disburse funds for direct project costs and the proportionate share of any allowable indirect costs. If same-day transfers are not feasible, advance payments must be as close as is administratively feasible to actual disbursements.

c . Adjusting payment requests for available cash. You must disburse any funds that are available from repayments to and interest earned on a revolving fund, program income, rebates, refunds, contract settlements, audit recoveries, credits, discounts, and interest earned on any of those funds before requesting additional cash payments from DOE/NNSA.

d. Payments. All payments are made by electronic funds transfer to the bank account identified on the ASAP Bank Information Form that you filed with the U.S. Department of Treasury.

FA-TC-0004.2 INCREMENTAL FUNDING AND MAXIMUM OBLIGATION - COEXTENSIVE BUDGET PERIOD AND PROJECT PERIOD

This award is funded on an incremental basis. The maximum obligation of the DOE/NNSA is limited to the amount shown on the Agreement Face Page. You are not obligated to continue performance of the project beyond the total amount obligated and your pro rata share of the project costs, if cost sharing is required. Additional funding is contingent upon the availability of appropriated funds and substantial progress towards meeting the objectives of the award.

FA-TC-0007.1 REBUDGETING AND RECOVERY OF INDIRECT COSTS - REIMBURSABLE INDIRECT COSTS AND FRINGE BENEFITS

a. If actual allowable indirect costs are less than those budgeted and funded under the award, you may use the difference to pay additional allowable direct costs during the project period. If at the completion of the award the Government's share of total allowable costs (i.e., direct and indirect), is less than the total costs reimbursed, you must refund the difference.

b. Recipients are expected to manage their indirect costs. DOE will not amend an award solely to provide additional funds for changes in indirect cost rates. DOE recognizes that the inability to obtain full reimbursement for indirect costs means the recipient must absorb the underrecovery. Such underrecovery may be allocated as part of the organization's required cost sharing.

FA-TC-0009.1 USE OF PROGRAM INCOME - ADDITION

If you earn program income during the project period as a result of this award, you may add the program income to the funds committed to the award and use it to further eligible project objectives.

FA-TC-0010 STATEMENT OF FEDERAL STEWARDSHIP

DOE/NNSA will exercise normal Federal stewardship in overseeing the project activities performed under this award. Stewardship activities include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing technical assistance and/or temporary intervention in unusual circumstances to correct deficiencies which develop during the project; assuring compliance with terms and conditions; and reviewing technical performance after project completion to insure that the award objectives have been accomplished.

FA-TC-0012 SITE VISITS

DOE/NNSA's authorized representatives have the right to make site visits at reasonable times to review project accomplishments and management control systems and to provide technical assistance, if required. You must provide, and must require your subawardees to provide, reasonable access to facilities, office space, resources, and assistance for the safety and convenience of the government representatives in the performance of their duties. All site visits and evaluations must be performed in a manner that does not unduly interfere with or delay the work.

FA-TC-0013 REPORTING REQUIREMENTS

a. Requirements. The reporting requirements for this award are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to this award. Failure to comply with these reporting requirements is considered a material noncompliance with the terms of the award. Noncompliance may result in withholding of future payments, suspension or termination of the current award, and withholding of future awards. A willful failure to perform, a history of failure to perform, or unsatisfactory performance of this and/or other financial assistance awards, may also result in a debarment action to preclude future awards by Federal agencies.

b. Dissemination of scientific/technical reports. Scientific/technical reports submitted under this award will be disseminated on the Internet via the DOE Information Bridge (www.osti.gov/bridge), unless the report contains patentable material, protected data or SBIR/STTR data. In addition, these reports must not contain any limited rights data (proprietary data), classified information, information subject to export control classification, or other information not subject to release. Citations for journal articles produced under the award will appear on the DOE Energy Citations Database (www.osti.gov/energycitations).

c. Restrictions. Reports submitted to the DOE Information Bridge must not contain any Protected Personal Identifiable Information (PII), limited rights data (proprietary data), classified information, information subject to export control classification, or other information not subject to release.

FA-TC-0014 PUBLICATIONS

a. You are encouraged to publish or otherwise make publicly available the results of the work conducted under the award.

b. An acknowledgment of Federal support and a disclaimer must appear in the publication of any material, whether copyrighted or not, based on or developed under this project, as follows:

Acknowledgment: "This material is based upon work supported by the Department of Energy [National Nuclear Security Administration] [add name(s) of other agencies, if applicable] under Award Number(s) [enter the award number(s)]."

Disclaimer: "This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof."

FA-TC-0015 FEDERAL, STATE, AND MUNICIPAL REQUIREMENTS

You must obtain any required permits and comply with applicable federal, state, and municipal laws, codes, and regulations for work performed under this award.

FA-TC-0016 INTELLECTUAL PROPERTY PROVISIONS AND CONTACT INFORMATION

a. The intellectual property provisions applicable to this award are provided as an attachment to this award or are referenced on the Agreement Face Page. A list of all intellectual property provisions may be found at http://www.gc.doe.gov/financial_assistance_awards.htm..

b. Questions regarding intellectual property matters should be referred to the DOE Award Administrator and the Patent Counsel designated as the service provider for the DOE office that issued the award. The IP Service Providers List is found at http://www.gc.doe.gov/documents/Intellectual_Property_(IP)_Service_Providers_for_Acquisition.pdf.

FA-TC-0019 LOBBYING RESTRICTIONS

By accepting funds under this award, you agree that none of the funds obligated on the award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

FA-TC-0020 NOTICE REGARDING THE PURCHASE OF AMERICAN-MADE EQUIPMENT AND PRODUCTS -- SENSE OF CONGRESS

It is the sense of the Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available under this award should be American-made.

INL ACCESS SAFETY

The NE-ID Idaho National Laboratory (INL), Advanced Mixed Waste Treatment Project (AMWTP), Spent Nuclear Fuel Disposition and Storage Project (SNFDSP) and Idaho Completion Project (ICP) contractors (hereafter referred as site contractors) are responsible for the safe conduct of operations at the INL and within facilities they occupy or control. Your work at the INL and any of these facilities must be performed in a manner that is consistent with the procedures established by these contractors that apply to site access controls, safeguards and security requirements, and the safe conduct of work. You will develop an interface agreement with the appropriate site contractor, subject to NE-ID approval, on matters not governed by these procedures or where deviation from these procedures is necessary. You will also work cooperatively with the site contractors to clearly: 1) define, demarcate and document the boundaries within which work will be conducted; and, 2) define and document the respective roles and responsibilities with the site contractor relative to managing that work control boundary. Unless otherwise agreed, site contractor policies and procedures shall apply to the conduct of work outside your work boundary and your policies and procedures shall govern within that boundary. You are responsible for the training and safety of individuals working for you and are obligated to ensure their fitness for duty. You will notify the NE-ID Contracting Officer's Representative of work activities and future work plans. You must also coordinate these activities and plans with the appropriate site contractor authority for the area in which you will be performing work and seek the approval of that authority prior to commencing work.

The INL has adopted the principles and core functions of Integrated Safety Management and the Voluntary Protection Program. Work performed by you or your subcontractors at the INL will be appropriately planned and controlled commensurate with the risks and hazards involved. At a minimum, your system for managing and controlling work shall include:

1) Definition of the scope of the work to be performed;
2) Identification of the hazards to be expected in the performance of the work, including hazards of the work and of the work environment;

3) Requirements and provisions for mitigation of those hazards;

4) Provisions for worker training in the identified hazards and controls;

5) A means for controlling the work to ensure that the effort remains within scope and that hazard mitigations are maintained; and,

6) Provisions for active worker involvement in job safety and fitness for duty

Normal work hours at the INL are from 7:00 A.M. to 5:30 P.M on Monday through Thursday. Normal work hours at the Idaho Falls facilities are from 7:00 A.M. to 5:00 P.M on Monday through Thursday and on alternating Fridays. Work outside of these hours shall require advance notification to, and approval from, the appropriate site contractor authority.

The Department of Energy (DOE) has primary responsibility for safety and health oversight only if you have a contract directly with NE-ID. NE-ID INL will conduct oversight within INL site areas, including all site areas beyond facility boundaries. NE-ID ICP will conduct oversight within ICP areas. The site contractors and all INL employees have the right to stop any activity, if continuation of that activity would either be considered an imminent danger situation or have a negative impact on the environment, safety or health of the site, the workers or the public. It shall be mandatory in the event of any such "stop work," that all work shall cease pending NE-ID notification and resolution of the issue.

An imminent danger situation exists when any condition or practice could reasonably be expected to cause death or serious physical harm immediately or before the imminence of such danger can be eliminated through enforcement procedures.
A negative impact on the environment, safety or health of site workers or the public includes situations that result in unplanned releases to the environment, uncontrolled exposures to workers or the public, or programmatic failures that could result in these situations.

NE-ID will resolve any disagreement between you and the site contractors regarding the application of these requirements.

Failure to meet these minimum safety expectations will require the development and submittal of a corrective action plan to the NE-ID Contracting Officer and Contracting Officer's Representative. Continued failures may result in further adverse action. This clause does not affect all other obligations you have under law or contract to conduct activities in a manner that is safe to people and the environment.

STAGED DISBURSEMENT - RECOVERY ACT FUNDS

Funding under this Recovery Act formula grant award will be obligated in accordance with the following disbursement schedule:

* 10% of the recipient's total allocation at time the initial grant is awarded.
* Remaining balance (90%) of the recipient's total allocation upon DOE approval of the State Plan. This will be done through a modification to the grant award.

If Progress Reviews reveal deficiencies, such as funds not disbursed, jobs not created, insufficient technical monitoring, or failure to meet reporting requirements, DOE reserves the right to place a hold on current balances, and withhold further funding until deficiencies are corrected.

SPECIAL PROVISIONS RELATING TO WORK FUNDED UNDER AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009

Preamble

The American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, (Recovery Act) was enacted to preserve and create jobs and promote economic recovery, assist those most impacted by the recession, provide investments needed to increase economic efficiency by spurring technological advances in science and health, invest in transportation, environmental protection, and other infrastructure that will provide long-term economic benefits, stabilize State and local government budgets, in order to minimize and avoid reductions in essential services and counterproductive State and local tax increases. Recipients shall use grant funds in a manner that maximizes job creation and economic benefit.

The Recipient shall comply with all terms and conditions in the Recovery Act relating generally to governance, accountability, transparency, data collection and resources as specified in Act itself and as discussed below.

Recipients should begin planning activities for their first tier subrecipients, including obtaining a DUNS number (or updating the existing DUNS record), and registering with the Central Contractor Registration (CCR).

Be advised that Recovery Act funds can be used in conjunction with other funding as necessary to complete projects, but tracking and reporting must be separate to meet the reporting requirements of the Recovery Act and related guidance. For projects funded by sources other than the Recovery Act, Contractors must keep separate records for Recovery Act funds and to ensure those records comply with the requirements of the Act.

The Government has not fully developed the implementing instructions of the Recovery Act, particularly concerning specific procedural requirements for the new reporting requirements. The Recipient will be provided these details as they become available. The Recipient must comply with all requirements of the Act. If the recipient believes there is any inconsistency between ARRA requirements and current award terms and conditions, the issues will be referred to the Contracting Officer for reconciliation.

Definitions

For purposes of this clause, Covered Funds means funds expended or obligated from appropriations under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5. Covered Funds will have special accounting codes and will be identified as Recovery Act funds in the grant, cooperative agreement or TIA and/or modification using Recovery Act funds. Covered Funds must be reimbursed by September 30, 2015.

Non-Federal employer means any employer with respect to covered funds – the contractor, subcontractor, grantee, or recipient, as the case may be, if the contractor, subcontractor, grantee, or recipient is an employer; and any professional membership organization, certification of other professional body, any agent or licensee of the Federal government, or any person acting directly or indirectly in the interest of an employer receiving covered funds; or with respect to covered funds received by a State or local government, the State or local government receiving the funds and any contractor or subcontractor receiving the funds and any contractor or subcontractor of the State or local government; and does not mean any department, agency, or other entity of the federal government.

Recipient means any entity that receives Recovery Act funds directly from the Federal government (including Recovery Act funds received through grant, loan, or contract) other than an individual and includes a State that receives Recovery Act Funds.

Special Provisions

A. Flow Down Requirement

Recipients must include these special terms and conditions in any subaward.

B. Segregation of Costs

Recipients must segregate the obligations and expenditures related to funding under the Recovery Act. Financial and accounting systems should be revised as necessary to segregate, track and maintain these funds apart and separate from other revenue streams. No part of the funds from the Recovery Act shall be commingled with any other funds or used for a purpose other than that of making payments for costs allowable for Recovery Act projects.

C. Prohibition on Use of Funds

None of the funds provided under this agreement derived from the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, may be used by any State or local government, or any private entity, for any casino or other gambling establishment, aquarium, zoo, golf course, or swimming pool.

D. Access to Records

With respect to each financial assistance agreement awarded utilizing at least some of the funds appropriated or otherwise made available by the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, any representative of an appropriate inspector general appointed under section 3 or 8G of the Inspector General Act of 1988 (5 U.S.C. App.) or of the Comptroller General is authorized –

(1) to examine any records of the contractor or grantee, any of its subcontractors or subgrantees, or any State or local agency administering such contract that pertain to, and involve transactions relation to, the subcontract, subcontract, grant, or subgrant; and

(2) to interview any officer or employee of the contractor, grantee, subgrantee, or agency regarding such transactions.

E. Publication

An application may contain technical data and other data, including trade secrets and/or privileged or confidential information, which the applicant does not want disclosed to the public or used by the Government for any purpose other than the application. To protect such data, the applicant should specifically identify each page including each line or paragraph thereof containing the data to be protected and mark the cover sheet of the application with the following Notice as well as referring to the Notice on each page to which the Notice applies:

Notice of Restriction on Disclosure and Use of Data

The data contained in pages ---- of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data here to the extent provided in the award. This restriction does not limit the Government's right to use or disclose data obtained without restriction from any source, including the applicant.

Information about this agreement will be published on the Internet and linked to the website www.recovery.gov, maintained by the Accountability and Transparency Board. The Board may exclude posting contractual or other information on the website on a case-by-case basis when necessary to protect national security or to protect information that is not subject to disclosure under sections 552 and 552a of title 5, United States Code.

F. Protecting State and Local Government and Contractor Whistleblowers.

The requirements of Section 1553 of the Act are summarized below. They include, but are not limited to:

Prohibition on Reprisals: An employee of any non-Federal employer receiving covered funds under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, may not be discharged, demoted, or otherwise discriminated against as a reprisal for disclosing, including a disclosure made in the ordinary course of an employee's duties, to the Accountability and Transparency Board, an inspector general, the Comptroller General, a member of Congress, a State or Federal regulatory or law enforcement agency, a person with supervisory authority over the employee (or other person working for the employer who has the authority to investigate, discover or terminate misconduct, a court or grant jury, the head of a Federal agency, or their representatives information that the employee believes is evidence of:

• gross management of an agency contract or grant relating to covered funds;
• a gross waste of covered funds
• a substantial and specific danger to public health or safety related to the implementation or use of covered funds;
• an abuse of authority related to the implementation or use of covered funds; or
• as violation of law, rule, or regulation related to an agency contract (including the competition for or negotiation of a contract) or grant, awarded or issued relating to covered funds.

Agency Action: Not later than 30 days after receiving an inspector general report of an alleged reprisal, the head of the agency shall determine whether there is sufficient basis to conclude that the non-Federal employer has subjected the employee to a prohibited reprisal. The agency shall either issue an order denying relief in whole or in part or shall take one or more of the following actions:

• Order the employer to take affirmative action to abate the reprisal.
• Order the employer to reinstate the person to the position that the person held before the reprisal, together with compensation including back pay, compensatory damages, employment benefits, and other terms and conditions of employment that would apply to the person in that position if the reprisal had not been taken.
• Order the employer to pay the employee an amount equal to the aggregate amount of all costs and expenses (including attorneys' fees and expert witnesses' fees) that were reasonably incurred by the employee for or in connection with, bringing the complaint regarding the reprisal, as determined by the head of a court of competent jurisdiction.

Nonenforceablity of Certain Provisions Waiving Rights and remedies or Requiring Arbitration: Except as provided in a collective bargaining agreement, the rights and remedies provided to aggrieved employees by this section may not be waived by any agreement, policy, form, or condition of employment, including any predispute arbitration agreement. No predispute arbitration agreement shall be valid or enforceable if it requires arbitration of a dispute arising out of this section.

Requirement to Post Notice of Rights and Remedies: Any employer receiving covered funds under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, shall post notice of the rights and remedies as required therein. (Refer to section 1553 of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, www.Recovery.gov, for specific requirements of this section and prescribed language for the notices.).

G. Request for Reimbursement

RESERVED

H. False Claims Act

Recipient and sub-recipients shall promptly refer to the DOE or other appropriate Inspector General any credible evidence that a principal, employee, agent, contractor, sub-grantee, subcontractor or other person has submitted a false claim under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict or interest, bribery, gratuity or similar misconduct involving those funds.

I. Information in supporting of Recovery Act Reporting

Recipient may be required to submit backup documentation for expenditures of funds under the Recovery Act including such items as timecards and invoices. Recipient shall provide copies of backup documentation at the request of the Contracting Officer or designee.

J. Availability of Funds

Funds appropriated under the Recovery Act and obligated to this award are available for reimbursement of costs until September 30, 2015.

K. Additional Funding Distribution and Assurance of Appropriate Use of Funds

Certification by Governor -- Not later than April 3, 2009, for funds provided to any State or agency thereof by the American

Reinvestment and Recovery Act of 2009, Pub. L. 111-5, the Governor of the State shall certify that: 1) the state will request and use funds provided by the Act; and 2) the funds will be used to create jobs and promote economic growth.

Acceptance by State Legislature -- If funds provided to any State in any division of the Act are not accepted for use by the Governor, then acceptance by the State legislature, by means of the adoption of a concurrent resolution, shall be sufficient to provide funding to such State.

Distribution – After adoption of a State legislature's concurrent resolution, funding to the State will be for distribution to local governments, councils of government, public entities, and public-private entities within the State either by formula or at the State's discretion.

L. Certifications

With respect to funds made available to State or local governments for infrastructure investments under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, the Governor, mayor, or other chief executive, as appropriate, certified by acceptance of this award that the infrastructure investment has received the full review and vetting required by law and that the chief executive accepts responsibility that the infrastructure investment is an appropriate use of taxpayer dollars. Recipient shall provide an additional certification that includes a description of the investment, the estimated total cost, and the amount of covered funds to be used for posting on the Internet. A State or local agency may not receive infrastructure investment funding from funds made available by the Act unless this certification is made and posted.

REPORTING AND REGISTRATION REQUIREMENTS UNDER SECTION 1512 OF THE RECOVERY

(a) This award requires the recipient to complete projects or activities which are funded under the American Recovery and Reinvestment Act of 2009 (Recovery Act) and to report on use of Recovery Act funds provided through this award. Information from these reports will be made available to the public.

(b) The reports are due no later than ten calendar days after each calendar quarter in which the recipient receives the assistance award funded in whole or in part by the Recovery Act.

(c) Recipients and their first-tier recipients must maintain current registrations in the Central Contractor Registration (http://www.ccr.gov) at all times during which they have active federal awards funded with Recovery Act funds. A Dun and Bradstreet Data Universal Numbering System (DUNS) Number (http://www.dnb.com) is one of the requirements for registration in the Central Contractor Registration.

(d) The recipient shall report the information described in section 1512(c) of the Recovery Act using the reporting instructions and data elements that will be provided online at http://www.FederalReporting.gov and ensure that any information that is pre-filled is corrected or updated as needed.

RECOVERY ACT TRANSACTIONS LISTED IN SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS AND RECIPIENT RESPONSIBILITIES FOR INFORMAING SUBRECIPIENTS

(a) To maximize the transparency and accountability of funds authorized under the American Recovery and Reinvestment Act of 2009 (Pub. L. 111–5) (Recovery Act) as required by Congress and in accordance with 2 CFR 215.21 "Uniform Administrative Requirements for Grants and Agreements" and OMB Circular A–102 Common Rules provisions, recipients agree to maintain records that identify adequately the source and application of Recovery Act funds. OMB Circular A–102 is available at http://www.whitehouse.gov/omb/circulars/a102/a102.html.

(b) For recipients covered by the Single Audit Act Amendments of 1996 and OMB Circular A–133, "Audits of States, Local Governments, and Non-Profit Organizations," recipients agree to separately identify the expenditures for Federal awards under the Recovery Act on the Schedule of Expenditures of Federal Awards (SEFA) and the Data Collection Form (SF–SAC) required by OMB Circular A–133. OMB Circular A–133 is available at http://www.whitehouse.gov/omb/circulars/a133/a133.html. This shall be accomplished by identifying expenditures for Federal awards made under the Recovery Act separately on the SEFA, and as separate rows under Item 9 of Part III on the SF–SAC by CFDA number, and inclusion of the prefix "ARRA-" in identifying the name of the Federal program on the SEFA and as the first characters in Item 9d of Part III on the SF–SAC.

(c) Recipients agree to separately identify to each subrecipient, and document at the time of subaward and at the time of disbursement of funds, the Federal award number, CFDA number, and amount of Recovery Act funds. When a recipient awards Recovery Act funds for an existing program, the information furnished to subrecipients shall distinguish the subawards of incremental Recovery Act funds from regular subawards under the existing program.

(d) Recipients agree to require their subrecipients to include on their SEFA information to specifically identify Recovery Act funding similar to the requirements for the recipient SEFA described above. This information is needed to allow the recipient to properly monitor subrecipient expenditure of ARRA funds as well as oversight by the Federal awarding agencies, Offices of

Inspector General and the Government Accountability Office.

DOE F 4600.2
(2/09)
All Other Editions Are Obsolete

Attachment 2
Sample

U.S. Department of Energy
FEDERAL ASSISTANCE REPORTING CHECKLIST AND INSTRUCTIONS

1. Identification Number: DE-FOA-0000119	2. Program/Project Title: State Energy Efficient Appliance Rebate Program		
3. Recipient: To be Determined ,			
4. Reporting Requirements:	Frequency	No. of Copies	Addresses
A. MANAGEMENT REPORTING ☐ Progress Report ☐ Special Status Report			
B. SCIENTIFIC/TECHNICAL REPORTING Reports/Products must be submitted with appropriate DOE F 241. The 241 forms are available at www.osti.gov/elink .) Report/Product — Form ☐ Final Scientific/Technical Report — DOE F 241.3 ☐ Conference papers/proceedings* — DOE F 241.3 ☐ Software/Manual — DOE F 241.3 ☐ Other (see special instructions) — DOE F 241.3 * *Scientific and technical conferences only*			A, B applies to any specified OSTI reports http://www.osti.gov/elink-2413 http://www.osti.gov/elink-2413 http://www.osti.gov/estsc/241-4pre.jsp
C. FINANCIAL REPORTING ☑ SF-425, Federal Financial Report	F	via Email	
D. CLOSEOUT REPORTING ☐ Patent Certification ☐ Property Certification ☐ Other			
E. OTHER REPORTING ☐ Annual Indirect Cost Proposal ☐ Annual Inventory of Federally Owned Property, if any ☑ Other		via Email	See Section F. Special Instructions
FREQUENCY CODES AND DUE DATES: A - Within 5 calendar days after Awards or as specified F - Final; 90 calendar days after expiration or termination of the award. Y - Yearly; 90 days after the end of the reporting period. S - Semiannually; within 30 days after end of reporting period. Q - Quarterly; within 30 days after end of the reporting period.			
5. Special Instructions: See Section F. Special Instructions			

Federal Assistance Reporting Instructions (2/09)

A. MANAGEMENT REPORTING

Progress Report

The Progress Report must provide a concise narrative assessment of the status of work and include the following information and any other information identified under Special Instructions on the Federal Assistance Reporting Checklist:

1. The DOE award number and name of the recipient.
2. The project title and name of the project director/principal investigator.
3. Date of report and period covered by the report.
4. A comparison of the actual accomplishments with the goals and objectives established for the period and reasons why the established goals were not met.
5. A discussion of what was accomplished under these goals during this reporting period, including major activities, significant results, major findings or conclusions, key outcomes or other achievements. This section should not contain any proprietary data or other information not subject to public release. If such information is important to reporting progress, do not include the information, but include a note in the report advising the reader to contact the Principal Investigator or the Project Director for further information.
6. Cost Status. Show approved budget by budget period and actual costs incurred. If cost sharing is required break out by DOE share, recipient share, and total costs.
7. Schedule Status. List milestones, anticipated completion dates and actual completion dates. If you submitted a project management plan with your application, you must use this plan to report schedule and budget variance. You may use your own project management system to provide this information.
8. Any changes in approach or aims and reasons for change. Remember significant changes to the objectives and scope require prior approval by the contracting officer.
9. Actual or anticipated problems or delays and actions taken or planned to resolve them.
10. Any absence or changes of key personnel or changes in consortium/teaming arrangement.
11. A description of any product produced or technology transfer activities accomplished during this reporting period, such as:

    A. Publications (list journal name, volume, issue); conference papers; or other public releases of results. Attach or send copies of public releases to the DOE Project Officer identified in Block 11 of the Notice of Financial Assistance Award.
    B. Web site or other Internet sites that reflect the results of this project.
    C. Networks or collaborations fostered.
    D. Technologies/Techniques.
    E. Inventions/Patent Applications
    F. Other products, such as data or databases, physical collections, audio or video, software or netware, models, educational aid or curricula, instruments or equipment.

Special Status Report

The recipient must report the following Awards by e-mail as soon as possible after they occur:

1. Developments that have a significant favorable impact on the project.
2. Problems, delays, or adverse conditions which materially impair the recipient's ability to meet the objectives of the award or which may require DOE to respond to questions relating to such Awards from the public. The recipient must report any of the following incidents and include the anticipated impact and remedial action to be taken to correct or resolve the problem/condition:

    a. Any single fatality or injuries requiring hospitalization of five or more individuals.
    b. Any significant environmental permit violation.
    c. Any verbal or written Notice of Violation of any Environmental, Safety, and Health statutes.
    d. Any incident which causes a significant process or hazard control system failure.
    e. Any Award which is anticipated to cause a significant schedule slippage or cost increase.
    f. Any damage to Government-owned equipment in excess of $50,000.
    g. Any other incident that has the potential for high visibility in the media.

B. SCIENTIFIC/TECHNICAL REPORTS

Final Scientific/Technical Report

Content. The final scientific/technical report must include the following information and any other information identified under Special Instructions on the Federal Assistance Reporting Checklist:

1. Identify the DOE award number; name of recipient; project title; name of project director/principal investigator; and consortium/teaming members.

2. Display prominently on the cover of the report any authorized distribution limitation notices, such as patentable material or protected data. Reports delivered without such notices may be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use or reproduction of such reports.
3. Provide an executive summary, which includes a discussion of 1) how the research adds to the understanding of the area investigated; 2) the technical effectiveness and economic feasibility of the methods or techniques investigated or demonstrated; or 3) how the project is otherwise of benefit to the public. The discussion should be a minimum of one paragraph and written in terms understandable by an educated layman.
4. Provide a comparison of the actual accomplishments with the goals and objectives of the project.
5. Summarize project activities for the entire period of funding, including original hypotheses, approaches used, problems encountered and departure from planned methodology, and an assessment of their impact on the project results. Include, if applicable, facts, figures, analyses, and assumptions used during the life of the project to support the conclusions.
6. Identify products developed under the award and technology transfer activities, such as:

    a. Publications (list journal name, volume, issue), conference papers, or other public releases of results. If not provided previously, attach or send copies of any public releases to the DOE Project Officer identified in Block 11 of the Notice of Financial Assistance Award;
    b. Web site or other Internet sites that reflect the results of this project;
    c. Networks or collaborations fostered;
    d. Technologies/Techniques;
    e. Inventions/Patent Applications, licensing agreements; and
    f. Other products, such as data or databases, physical collections, audio or video, software or netware, models, educational aid or curricula, instruments or equipment.
7. For projects involving computer modeling, provide the following information with the final report:

    a. Model description, key assumptions, version, source and intended use;
    b. Performance criteria for the model related to the intended use;
    c. Test results to demonstrate the model performance criteria were met (e.g., code verification/validation, sensitivity analyses, history matching with lab or field data, as appropriate);
    d. Theory behind the model, expressed in non-mathematical terms;
    e. Mathematics to be used, including formulas and calculation methods;
    f. Whether or not the theory and mathematical algorithms were peer reviewed, and, if so, include a summary of theoretical strengths and weaknesses;
    g. Hardware requirements; and
    h. Documentation (e.g., users guide, model code).

Electronic Submission. The final scientific/technical report must be submitted electronically via the DOE Energy Link System (E-Link) accessed at http://www.osti.gov/elink-2413.

Electronic Format. Reports must be submitted in the ADOBE PORTABLE DOCUMENT FORMAT (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematic, graphs, and charts.

Submittal Form. The report must be accompanied by a completed electronic version of DOE Form 241.3, "U.S. Department of Energy (DOE), Announcement of Scientific and Technical Information (STI)." You can complete, upload, and submit the DOE F.241.3 online via E-Link. You are encouraged not to submit patentable material or protected data in these reports, but if there is such material or data in the report, you must: (1) clearly identify patentable or protected data on each page of the report; (2) identify such material on the cover of the report; and (3) mark the appropriate block in Section K of the DOE F 241.3. Reports must not contain any limited rights data (proprietary data), classified information, information subject to export control classification, or other information not subject to release. Protected data is specific technical data, first produced in the performance of the award that is protected from public release for a period of time by the terms of the award agreement.

Protected Personally Identifiable Information (PII). Management Reports or Scientific/Technical Reports must not contain any Protected PII. PII is any information about an individual which can be used to distinguish or trace an individual's identity. Some information that is considered to be PII is available in public sources such as telephone books, public websites, university listings, etc. This type of information is considered to be Public PII and includes, for example, first and last name, address, work telephone number, e-mail address, home telephone number, and general educational credentials. In contrast, Protected PII is defined as an individual's first name or first initial and last name in combination with any one or more of types of information, including, but not limited to, social security number, passport number, credit card numbers, clearances, bank numbers, biometrics, date and place of birth, mother's maiden name, criminal, medical and financial records, educational transcripts, etc.

Conference Papers/Proceedings

Content: The recipient must submit a copy of any conference papers/proceedings, with the following information: (1) Name of conference; (2) Location of conference; (3) Date of conference; and (4) Conference sponsor.

Electronic Submission. Scientific/technical conference paper/proceedings must be submitted electronically via the DOE Energy Link System (E-Link) at http://www.osti.gov/elink-2413. Non-scientific/technical conference papers/proceedings must be sent to the URL listed on the Reporting Checklist.

Electronic Format. Conference papers/proceedings must be submitted in the ADOBE PORTABLE DOCUMENT FORMAT (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematic, graphs, and charts.

Submittal Form. Scientific/technical conference papers/proceedings must be accompanied by a completed DOE Form 241.3. The form and instructions are available on E-Link at http://www.osti.gov/elink-2413. This form is not required for non-scientific or non-technical conference papers or proceedings.

Software/Manual

Content. Unless otherwise specified in the award, the following must be delivered: source code, the executable object code and the minimum support documentation needed by a competent user to understand and use the software and to be able to modify the software in subsequent development efforts.

Electronic Submission. Submissions may be submitted electronically via the DOE Energy Link System (E-Link) at http://www.osti.gov/estsc/241-4pre.jsp. They may also be submitted via regular mail to:

Energy Science and Technology Software Center
P.O. Box 1020
Oak Ridge, TN 37831

Submittal Form. Each software deliverable and its manual must be accompanied by a completed DOE Form 241.4 "Announcement of U.S. Department of Energy Computer Software." The form and instructions are available on E-Link at http://www.osti.gov/estsc/241-4pre.jsp.

C. FINANCIAL REPORTING

Recipients must complete the SF-425 as identified on the Reporting Checklist in accordance with the report instructions. A fillable version of the form is available at http://www.whitehouse.gov/omb/grants/grants_forms.aspx. Fillable forms are available at http://grants.pr.doe.gov.

D. CLOSEOUT REPORTS

Final Invention and Patent Report

The recipient must provide a DOE Form 2050.11, "PATENT CERTIFICATION." This form is available at http://www.directives.doe.gov/pdfs/forms/2050-11.pdf and http://management.energy.gov/business_doe/business_forms.htm.

Property Certification

The recipient must provide the Property Certification, including the required inventories of non-exempt property, located at http://management.energy.gov/business_doe/business_forms.htm.

E. OTHER REPORTING

Annual Indirect Cost Proposal and Reconciliation

Requirement. In accordance with the applicable cost principles, the recipient must submit an annual indirect cost proposal, reconciled to its financial statements, within six months after the close of the fiscal year, unless the award is based on a predetermined or fixed indirect rate(s), or a fixed amount for indirect or facilities and administration (F&A) costs.

Cognizant Agency. The recipient must submit its annual indirect cost proposal directly to the cognizant agency for negotiating and approving indirect costs.

Annual Inventory of Federally Owned Property

Requirement. If at any time during the award the recipient is provided Government-furnished property or acquires property with project funds and the award specifies that the property vests in the Federal Government (i.e. federally owned property), the recipient must submit an annual inventory of this property to the DOE Award Administrator identified in Block 12 of the Notice of Financial Assistance Award no later than October 30th of each calendar year, to cover an annual reporting period ending on the preceding September 30th.

Content of Inventory. The inventory must include a description of the property, tag number, acquisition date, location of property, and acquisition cost, if purchased with project funds. The report must list all federally owned property, including property located at subcontractor's facilities or other locations.

F. SPECIAL INSTRUCTIONS

Your performance in providing on-time report deliverables will be monitored by Procurement Services Division (PSD), Idaho Operations Office, Department of Energy. Reports not received by the specified due date are late. Overdue, inaccurate, or non-conforming reports are not acceptable. PSD will withhold payments or take other administrative actions as needed for non-compliance with reporting requirements (see 10 CFR 600.24). Only the Contracting Officer may waive or excuse required reports.

In order for accurate logging and processing of reports, it is critical that reports be sent to all the specified addressees and in the manner requested. PSD receives a copy of all reports via psdrept@id.doe.gov. The message subject line must include the award number.

Message Subject Line Example: DE-FC07-02ID99999, 4Q SF 269A Report.

The official award number must also be identified on all reports. A project number, if assigned by the program manager, may also be included, but is not a substitute for the official award number.

Report forms and additional report submittal guidance may be found on PSD's Internet web site at http://www.id.doe.gov/doeid/psd/proc-div.html. General guidance, in a question and answer format, is listed under "FA Report Submittal Guidance."

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ADDITIONAL REPORTS

Report Name	Description	DueDate	Addresses

Quarterly Progress Report	States and territories must monitor their progress and report to DOE on rebate fulfillment on a quarterly basis. Program plans must specify how the states and territories will monitor their progress, including details about how data will be collected and submitted. Plans must also include details on fraud prevention and audit mechanisms. Reporting remains the responsibility of the State or Territory Energy Office regardless of whether it opts to outsource all or part of the program to a third-party implementer. All states and territories receiving funds shall monitor and report: 1. Number of rebates paid to consumers by dollar amount and product type 2. Total rebate dollars paid to consumers 3. Estimated energy savings achieved, based on a standard formula for each product, comparing it to the usage for its non-ENERGY STAR counterpart 4. Estimated jobs created or maintained 5. Administrative costs broken out by category: a) Accounting b) Processing c) Marketing d) Education e) Tracking	12/15/2009	A B

REPORT ADDRESSEES

A. Procurement Services Divsion (PSD): psdrept@id.doe.gov

B. DOE Project Manager: Wendolyn Holland, Wendolyn.Holland@ee.doe.gov

C. DOE Headquarters' Program Manager:

cc: Headquarters' Technical Monitor:

FY 2009 EE Rebates Stimulus State Calculations

State/Territory	State Population	Population % Adjusted	$ EE Rebates (Not Rounded)	$ EE Rebates (Rounded)
Alabama	4,661,900	1.51%	4,472,947	4,473,000
Alaska	686,293	0.22%	658,477	658,000
Arizona	6,500,180	2.11%	6,236,718	6,237,000
Arkansas	2,855,390	0.93%	2,739,657	2,740,000
California	36,756,666	11.92%	35,266,866	35,267,000
Colorado	4,939,456	1.60%	4,739,253	4,739,000
Connecticut	3,501,252	1.14%	3,359,341	3,359,000
Delaware	873,092	0.28%	837,704	838,000
District of Columbia	591,833	0.19%	567,845	568,000
Florida	18,328,340	5.95%	17,585,466	17,585,000
Georgia	9,685,744	3.14%	9,293,167	9,293,000
Hawaii	1,288,198	0.42%	1,235,985	1,236,000
Idaho	1,523,816	0.49%	1,462,054	1,462,000
Illinois	12,901,563	4.18%	12,378,644	12,379,000
Indiana	6,376,792	2.07%	6,118,331	6,118,000
Iowa	3,002,555	0.97%	2,880,857	2,881,000
Kansas	2,802,134	0.91%	2,688,559	2,689,000
Kentucky	4,269,245	1.38%	4,096,206	4,096,000
Louisiana	4,410,796	1.43%	4,232,020	4,232,000
Maine	1,316,456	0.43%	1,263,098	1,263,000
Maryland	5,633,597	1.83%	5,405,259	5,405,000
Massachusetts	6,497,967	2.11%	6,234,595	6,235,000
Michigan	10,003,422	3.24%	9,597,969	9,598,000
Minnesota	5,220,393	1.69%	5,008,803	5,009,000
Mississippi	2,938,618	0.95%	2,819,512	2,820,000
Missouri	5,911,605	1.92%	5,671,999	5,672,000
Montana	967,440	0.31%	928,228	928,000
Nebraska	1,783,432	0.58%	1,711,147	1,711,000
Nevada	2,600,167	0.84%	2,494,779	2,495,000
New Hampshire	1,315,809	0.43%	1,262,477	1,262,000
New Jersey	8,682,661	2.82%	8,330,740	8,331,000
New Mexico	1,984,356	0.64%	1,903,927	1,904,000
New York	19,490,297	6.32%	18,700,327	18,700,000
North Carolina	9,222,414	2.99%	8,848,616	8,849,000
North Dakota	641,481	0.21%	615,481	615,000
Ohio	11,485,910	3.73%	11,020,370	11,020,000
Oklahoma	3,642,361	1.18%	3,494,731	3,495,000
Oregon	3,790,060	1.23%	3,636,443	3,636,000
Pennsylvania	12,448,279	4.04%	11,943,732	11,944,000
Rhode Island	1,050,788	0.34%	1,008,198	1,008,000
South Carolina	4,479,800	1.45%	4,298,227	4,298,000
South Dakota	804,194	0.26%	771,599	772,000
Tennessee	6,214,888	2.02%	5,962,990	5,963,000
Texas	24,326,974	7.89%	23,340,967	23,341,000
Utah	2,736,424	0.89%	2,625,513	2,626,000
Vermont	621,270	0.20%	596,089	596,000
Virginia	7,769,089	2.52%	7,454,197	7,454,000
Washington	6,549,224	2.12%	6,283,775	6,284,000
West Virginia	1,814,468	0.59%	1,740,925	1,741,000
Wisconsin	5,627,967	1.83%	5,399,857	5,400,000
Wyoming	532,668	0.17%	511,078	511,000
American Samoa	57,291		100,000	100,000
Guam	173,456	0.06%	166,426	166,000
Northern Marianas	84,856		100,000	100,000
Puerto Rico	3,954,037	1.28%	3,793,774	3,794,000
Virgin Islands	108,448	0.04%	104,052	104,000
Total	308,437,812	100.00%	296,000,000	296,000,000

Note: American Samoa and Northern Marianas have been allocated the minimum amount of $100,000 each. If allocated purely on population percentages they would have been allocated less than the minimum. Population percentages for the remaining States/Territories were calculated using the US population less American Samoa and Northern Marianas. These percentages were then used to calculate each State/Territories allocation of the remaining funds.

Attachment 4

ID-EC98.1

APPLICANT ENVIRONMENTAL CHECKLIST

The following information must be provided to and approved by the Department of Energy (DOE) before a contractual document can be awarded. Complete and correct information expedites the review process.

SECTION A:

Project Title: _____

Applicant Organization: _____

Applicant Organization Contact (usually the PI): _____

Telephone Number and Email Address _____

SECTION B: Attach a complete and concise description of the project or activity. Include purpose and need and enough information so that a verification of the impacts can be performed. This allows DOE to make the proper NEPA determination.

SECTION C: SOURCES OF IMPACTS: WOULD THE PROPOSAL INVOLVE OR GENERATE ANY OF THE FOLLOWING? (If yes, please provide brief explanation. For example, if yes is checked for question 15, indicate how much waste will be generated and the office or procedure in place to handle disposal.)

	YES	NO		YES	NO
1. Air Emissions	_____	_____	10. Contaminated Soil	_____	_____
2. Asbestos Emissions or Waste	_____	_____	11. Industrial Waste Generation	_____	_____
3. Biological Hazards	_____	_____	12. PCBs	_____	_____
4. Discharge of Wastewater	_____	_____	13. Hazardous Waste Generation	_____	_____
5. Cultural/Historical Resources	_____	_____	14. Radioactive Waste Generation	_____	_____
6. Soil Disturbance	_____	_____	15. Mixed Waste Generation	_____	_____
7. Radioactive Material Use	_____	_____	16. Chemical Waste Disposal	_____	_____
8. Water/Well Use	_____	_____	17. Interaction with Wildlife/Habitat	_____	_____
9. Work Within a Floodplain	_____	_____	18. Chemical Use/Storage	_____	_____

SECTION D: CATEGORY EVALUATION CRITERIA, WOULD THE ACTION:

	YES	NO
1. Require cultural, historical, or biological clearances?	_____	_____
2. Impact sensitive resources identified in Item 1 above? Describe the mitigation plan.	_____	_____
3. Require or modify federal, state, or local permits, approvals, etc.?	_____	_____
4. Create hazardous, radioactive, PCB, or mixed waste for which no disposal is available?	_____	_____
5. Require siting, construction, or modification of a RCRA or TSCA regulated facility?	_____	_____
6. Is the activity included in an Environmental Impact Statement or Environmental Assessment?	_____	_____

SECTION E: CERTIFICATION. To the best of the applicant' s knowledge at the time of signing, the responses given above are complete and accurate, and should new issues or concerns arise or changes occur anytime after award and during the course of performance, the applicant will alert DOE immediately.

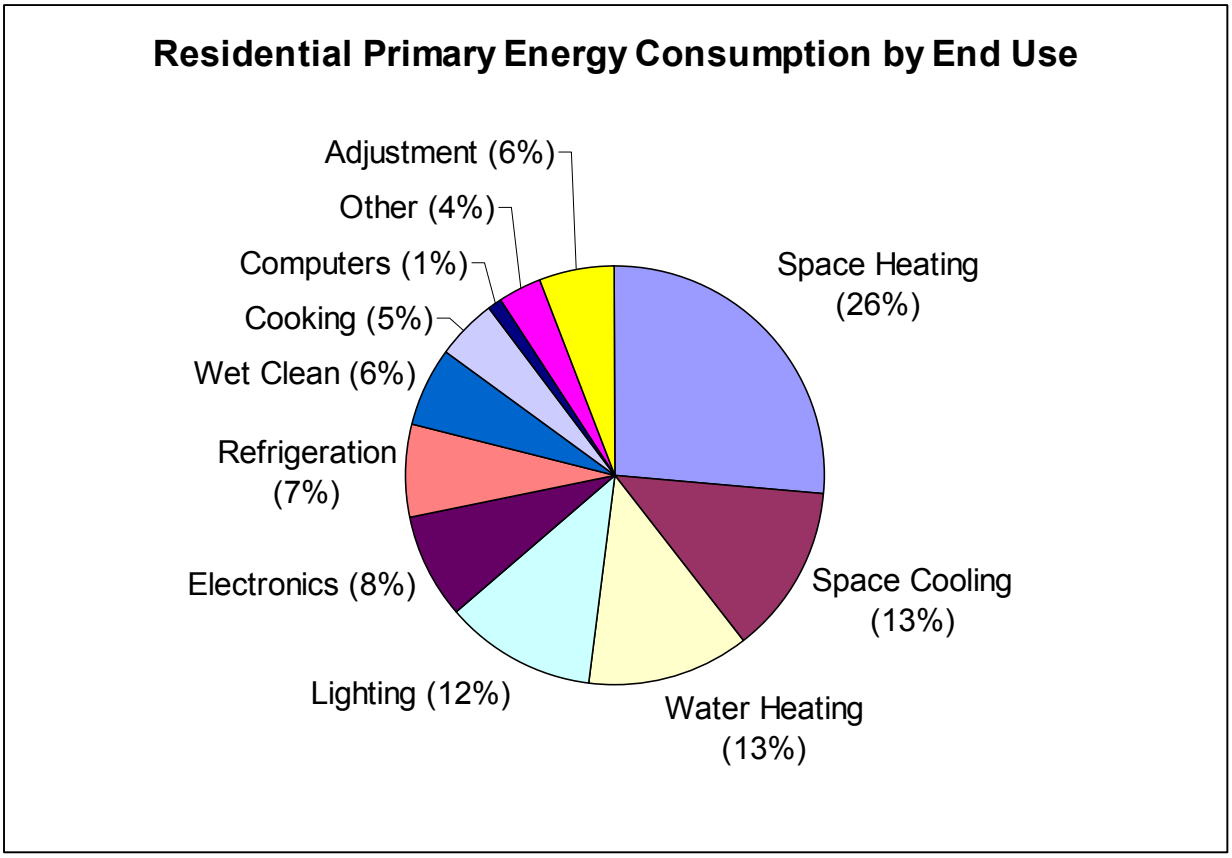
_____ _____

APPLICANT SIGNATURE & TITLE DATE

FOR DOE USE ONLY	
NEPA Doc Number:	**Solicitation #:**
NEPA CX Applied:	**Contract Specialist:**
Approved: **Signature/Date:**	**Project Manager:**

Appendix A
Residential Energy Consumption Data

The pie-chart and data table below summarize the breakdown of energy consumption in the residential sector. Space conditioning is the dominant end use, followed by appliances, water heating, lighting, and electronics.



Residential End Use	% of Residential Energy Use (Primary)	Annual Residential Energy Expenditures ($ Billions)
Space Heating	26%	$69.2
Space Cooling	13%	$30.5
Water Heating	13%	$26.0
Lighting	12%	$23.2
Electronics (TVs and Office Equipment)	8%	$18.4
Refrigeration (Refrigerators and Freezers)	7%	$16.3
Wet Clean (Clothes Washers, Dryers, Dishwashers)	6%	$12.7
Cooking	5%	$10.6
Computers	1%	$2.0
Other (Small Electronics, Pool Heaters, etc.)	4%	$9.3
Adjustment (Corrections)	6%	$7.4
Total	**100%**	**$225.6**

Source: U.S. Department of Energy. 2008. 2008 Buildings Energy Data Book. Pages 2-5, 2-17.

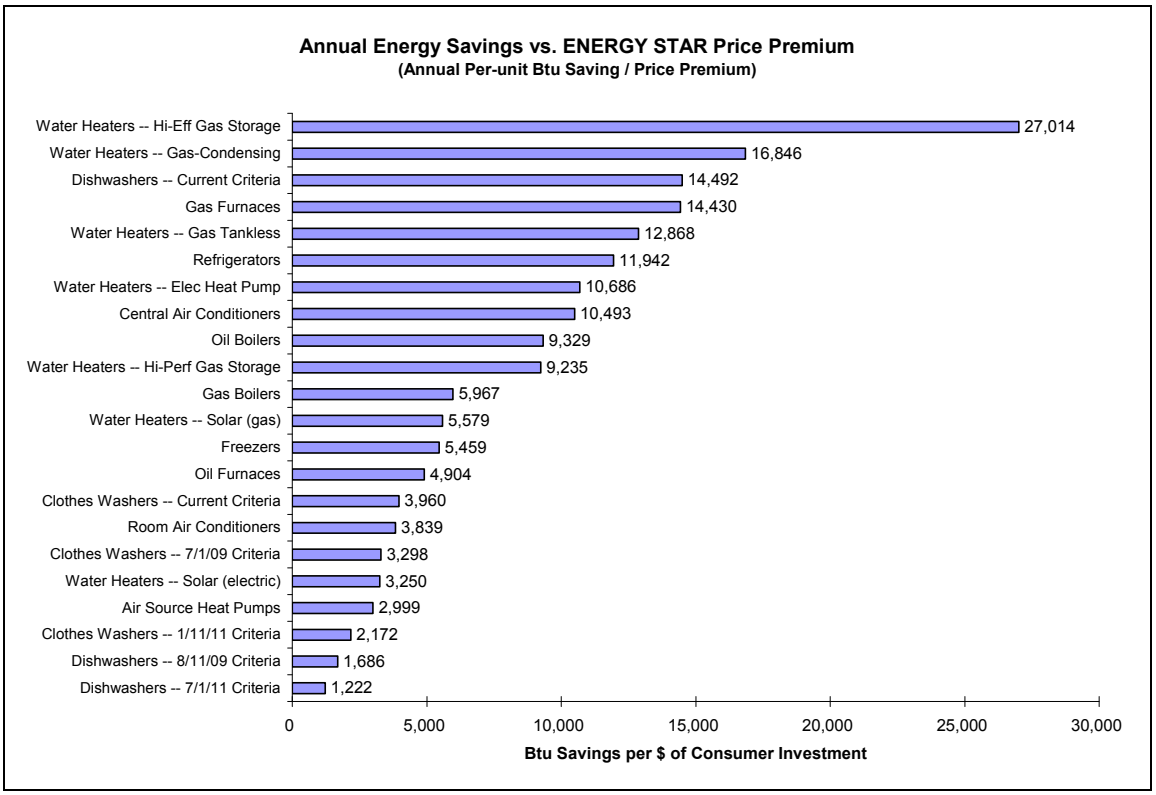
Appendix B
Market and Energy Data for Commonly Rebated ENERGY STAR Products

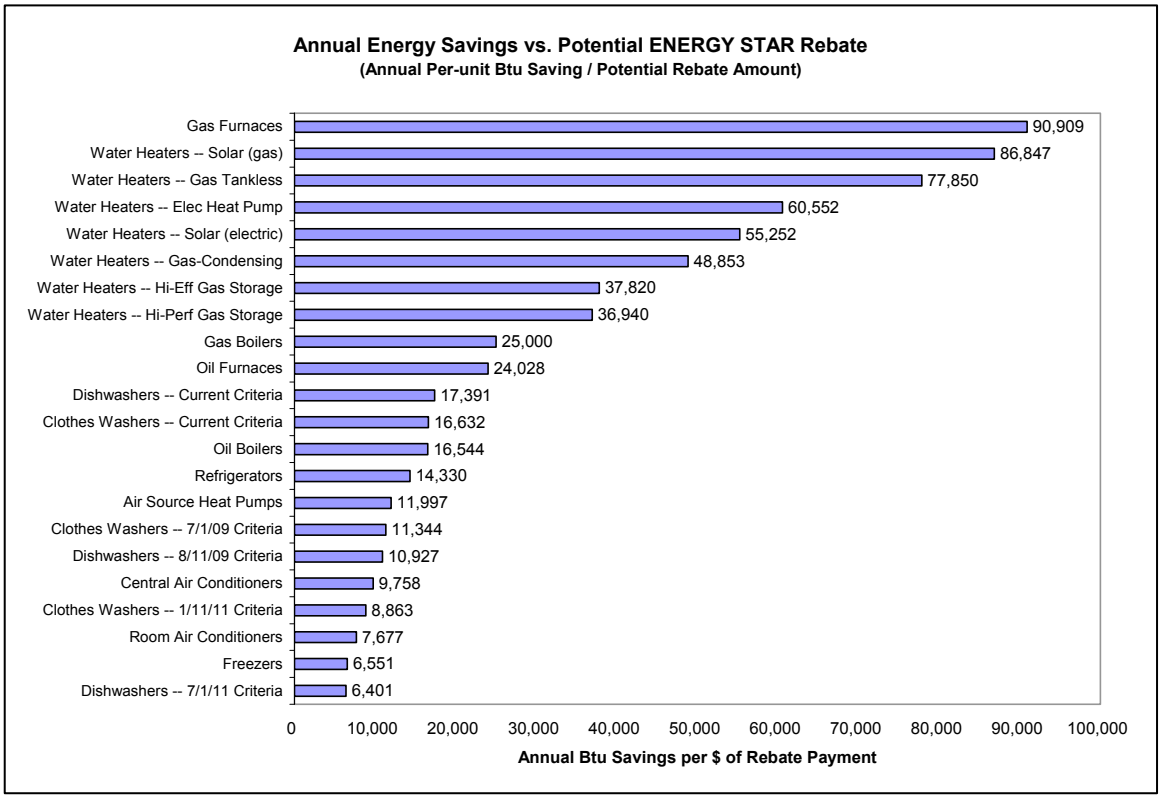
The ENERGY STAR products summarized in this Appendix are among those most commonly rebated by utilities and other energy-efficiency program sponsors. Outlined in the two tables below is information about the market size, product cost, energy savings, and representative rebate levels for each product. Also included is information that illustrates the relative energy savings benefits of each product compared to the average incremental cost and representative rebate levels.

Products	ENERGY STAR Criteria	Projected 2009 Total Category Unit Sales	ENERGY STAR Market Share
Clothes Washers	MEF >= 1.72, WF <= 8.0	7,860,000	42%
7/1/09 Criteria	MEF >= 1.8; WF <= 7.5	7,860,000	40%
1/11/11 Criteria	MEF >= 2.0; WF <= 6.0	7,860,000	30%
Dishwashers	EF >= 0.65	5,486,000	77%
8/11/09 Criteria	<= 324 kWh/year and <= 5.8 gallons per cycle	5,486,000	40%
7/1/11 Criteria	<=307 kWh/year and <= 5.0 gallons per cycle	5,486,000	20%
Refrigerators	20% better than Federal standard	8,700,000	30%
Freezers	10% better than Federal standard	2,046,250	3%
Room Air Conditioners	EER ~10% greater than Federal standard	8,660,495	50%
Water Heaters	Varies by type (see below)		
Gas-Condensing	EF >= 0.8	N/A	0%
Electric Heat Pump	EF >= 2.0	N/A	0%
Hi-Efficiency Gas Storage	EF >= 0.62	4,671,000	N/A
Hi-Perf Gas Storage	EF >= 0.67	4,671,000	N/A
Gas Tankless	EF >= 0.82	254,600	N/A
Solar (electric back-up)	SF >= 0.5	8,500	N/A
Solar (gas back-up)	SF >= 0.5	8,500	N/A
Central Air Conditioners	>=14.5 SEER/ >=12 EER for split systems; >=14 SEER/ >=11 EER for single package equipment including gas/electric package units	4,233,080	21%
Air Source Heat Pumps	>= 8.2 HSPF/ >=14.5 SEER/ >=12 EER for split systems; >= 8.0 HSPF/ >=14 SEER/ >=11 EER for single package equipment including gas/electric package units	1,768,260	18%
Oil Furnaces	AFUE >= 85%	43,443	10%
Gas Furnaces	AFUE >= 90%	2,128,234	32%
Oil Boilers	AFUE >= 85%	119,732	61%
Gas Boilers	AFUE >= 85%	188,485	39%

Product	Average Non-ENERGY STAR Price	Average ENERGY STAR Price Premium	Rebate Levels Repre-sentative Of existing programs	Annual Energy Savings (Btu)	Annual Energy Saved vs. Price Premium (Btu/$)	Annual Energy Saved vs. Potential Rebate (Btu/$)	Eligible for Federal Credit for Residential Energy Efficient Property?
Clothes Washers	$492	$210	$50	831,584	3,960	16,632	
7/1/09 Criteria	$492	$258	$75	850,792	3,298	11,344	
1/11/11 Criteria	$492	$408	$100	886,290	2,172	8,863	
Dishwashers	$538	$12	$10	173,910	14,492	17,391	
8/11/09 Criteria	$538	$162	$25	273,183	1,686	10,927	
7/1/11 Criteria	$538	$262	$50	320,065	1,222	6,401	
Refrigerators	$1,150	$30	$25	358,260	11,942	14,330	
Freezers	$852	$30	$25	163,776	5,459	6,551	
Room Air Conditioners	$180	$40	$20	153,540	3,839	7,677	
Water Heaters							
Gas-Condensing	$830	$435	$150	7,328,000	16,846	48,853	
Electric Heat Pump	$650	$850	$150	9,082,744	10,686	60,552	Y
Hi-Eff Gas Storage	$865	$70	$50	1,891,000	27,014	37,820	
Hi-Perf Gas Storage	$865	$400	$100	3,694,000	9,235	36,940	
Gas Tankless	$865	$605	$100	7,785,000	12,868	77,850	Y
Solar (electric back-up)	$650	$2,550	$150	8,287,748	3,250	55,252	Y
Solar (gas back-up)	$865	$2,335	$150	13,027,000	5,579	86,847	Y
Central Air Conditioners	$1,126	$93	$100	975,832	10,493	9,758	Y*
Air Source Heat Pumps	$5,700	$1,000	$250	2,999,148	2,999	11,997	Y*
Oil Furnaces	$3,142	$539	$110	2,643,072	4,904	24,028	Y*
Gas Furnaces	$2,044	$693	$110	10,000,000	14,430	90,909	Y*
Oil Boilers	$3,892	$532	$300	4,963,235	9,329	16,544	Y*
Gas Boilers	$3,630	$838	$200	5,000,000	5,967	25,000	Y*

Explanatory Notes:
Projected 2009 sales for solar and gas tankless water heaters are based on prior year sales.
Average non-ENERGY STAR price was compared to average ENERGY STAR price to determine the typical ENERGY STAR price premium.
Rebate levels are either approximate medians from the range of rebate amounts offered for a given product or an amount commonly offered by energy efficiency program sponsors. The ENERGY STAR DIME Database, one of the partner resources located on the energystar.gov website, provides information on both current and past rebate programs for these appliances. In the case of the gas-condensing and electric heat pump water heaters that have not yet entered the market, potential rebate levels are based on those for other appliances with similar price premiums and energy savings.
Energy savings is annual per-unit savings. Electricity (kWh) and natural gas (therm) savings are converted to Btu so all figures can be compared.
Energy saved vs. price premium is the total annual per-unit Btu savings divided by the average ENERGY STAR price premium.
Energy saved vs. potential rebate is the total annual per-unit Btu savings divided by the potential rebate level.
The Emergency Economic Stabilization Act of 2008 reestablished the "Credit for Residential Energy Efficient Property" for 2009, and increased the credit to 30%, up to $1,500. The American Recovery and Reinvestment Act of 2009 extended the tax credits to 2010 and made some changes to the eligible efficiency levels. Rebates for solar waters heaters go through 2016. For products marked Y* the required efficiency level is higher than the ENERGY STAR level. See www.energystar.gov/taxcredits for more info.


Annual Energy Savings vs. ENERGY STAR Price Premium
(Annual Per-unit Btu Saving / Price Premium)
Water Heaters -- Hi-Eff Gas Storage 27,014
Water Heaters -- Gas-Condensing 16,846
Dishwashers -- Current Criteria 14,492
Gas Furnaces 14,430
Water Heaters -- Gas Tankless 12,868
Refrigerators 11,942
Water Heaters -- Elec Heat Pump 10,686
Central Air Conditioners 10,493
Oil Boilers 9,329
Water Heaters -- Hi-Perf Gas Storage 9,235
Gas Boilers 5,967
Water Heaters -- Solar (gas) 5,579
Freezers 5,459
Oil Furnaces 4,904
Clothes Washers -- Current Criteria 3,960
Room Air Conditioners 3,839
Clothes Washers -- 7/1/09 Criteria 3,298
Water Heaters -- Solar (electric) 3,250
Air Source Heat Pumps 2,999
Clothes Washers -- 1/11/11 Criteria 2,172
Dishwashers -- 8/11/09 Criteria 1,686
Dishwashers -- 7/1/11 Criteria 1,222
0
5,000
10,000
15,000
20,000
25,000
30,000
Btu Savings per $ of Consumer Investment


Annual Energy Savings vs. Potential ENERGY STAR Rebate
(Annual Per-unit Btu Saving / Potential Rebate Amount)
Gas Furnaces 90,909
Water Heaters -- Solar (gas) 86,847
Water Heaters -- Gas Tankless 77,850
Water Heaters -- Elec Heat Pump 60,552
Water Heaters -- Solar (electric) 55,252
Water Heaters -- Gas-Condensing 48,853
Water Heaters -- Hi-Eff Gas Storage 37,820
Water Heaters -- Hi-Perf Gas Storage 36,940
Gas Boilers 25,000
Oil Furnaces 24,028
Dishwashers -- Current Criteria 17,391
Clothes Washers -- Current Criteria 16,632
Oil Boilers 16,544
Refrigerators 14,330
Air Source Heat Pumps 11,997
Clothes Washers -- 7/1/09 Criteria 11,344
Dishwashers -- 8/11/09 Criteria 10,927
Central Air Conditioners 9,758
Clothes Washers -- 1/11/11 Criteria 8,863
Room Air Conditioners 7,677
Freezers 6,551
Dishwashers -- 7/1/11 Criteria 6,401
0
10,000
20,000
30,000
40,000
50,000
60,000
70,000
80,000
90,000
100,000
Annual Btu Savings per $ of Rebate Payment

Data Sources:

Projected Annual Shipments of All Products in Category	
Clothes Washers	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
7/1/09 Criteria	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
1/11/09 Criteria	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
Dishwashers	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
8/11/09 Criteria	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
7/1/11 Criteria	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
Refrigerators	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
Freezers	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
Room Air Conditioners	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
WH -- Gas-Condensing	Unknown at this time.
WH -- Elec Heat Pump	Unknown at this time.
WH -- Hi-Eff Gas Storage	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
WH -- Hi-Perf Gas Storage	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
WH -- Gas Tankless	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Solar (electric)	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Solar (gas)	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
Central Air Conditioners	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
Air Source Heat Pumps	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
Oil Furnaces	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
Gas Furnaces	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
Oil Boilers	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
Gas Boilers	Appliance Magazine. "2009: Hope for Recovery." January 2009 issue.
ENERGY STAR Market Share	
Clothes Washers	D&R International 2009, Based on sales data collected from major retailers
7/1/09 Criteria	D&R International 2009, estimate
1/11/09 Criteria	D&R International 2009, estimate
Dishwashers	D&R International 2009, Based on sales data collected from major retailers
8/11/09 Criteria	D&R International 2009, estimate
7/1/11 Criteria	D&R International 2009, estimate
Refrigerators	D&R International 2009, Based on sales data collected from major retailers
Freezers	D&R International 2009, estimate
Room Air Conditioners	D&R International 2009, Based on sales data collected from major retailers
WH -- Gas-Condensing	D&R International 2009. No gas-condensing models are available yet.
WH -- Elec Heat Pump	D&R International 2009. No heat pump models are available yet.
WH -- Hi-Eff Gas Storage	No sales data has been collected yet for E* WHs as this is the first year of the program
WH -- Hi-Perf Gas Storage	No sales data has been collected yet for E* WHs as this is the first year of the program
WH -- Gas Tankless	No sales data has been collected yet for E* WHs as this is the first year of the program
WH -- Solar (electric)	No sales data has been collected yet for E* WHs as this is the first year of the program
WH -- Solar (gas)	No sales data has been collected yet for E* WHs as this is the first year of the program
Central Air Conditioners	LBNL October 2008
Air Source Heat Pumps	LBNL October 2008
Oil Furnaces	LBNL October 2008
Gas Furnaces	LBNL October 2008
Oil Boilers	LBNL October 2008
Gas Boilers	LBNL October 2008

Average ENERGY STAR Price	**(To Determine Price Premium)**
Clothes Washers	Provided by major retailer to D&R International 2/09
7/1/09 Criteria	D&R International 2009, estimate based on data from major retailer websites
1/11/09 Criteria	D&R International 2009, estimate based on data from major retailer websites
Dishwashers	Provided by major retailer to D&R International 2/09
8/11/09 Criteria	D&R International 2009, estimate based on data from major retailer websites
7/1/11 Criteria	D&R International 2009, estimate based on data from major retailer websites
Refrigerators	Provided by major retailer to D&R International 2/09
Freezers	Provided by major retailer to D&R International 2/09
Room Air Conditioners	Provided by major retailer to D&R International 2/09
WH -- Gas-Condensing	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Elec Heat Pump	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Hi-Eff Gas Storage	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Hi-Perf Gas Storage	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Gas Tankless	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Solar (electric)	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Solar (gas)	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
Central Air Conditioners	EPA ENERGY STAR CACs Savings Calculator accessed 5/09
Air Source Heat Pumps	EPA ENERGY STAR ASHPs Savings Calculator accessed 5/09
Oil Furnaces	DOE Standards TSD for Furnaces and Boilers, Sept. 2007
Gas Furnaces	DOE Standards TSD for Furnaces and Boilers, Sept. 2007
Oil Boilers	DOE Standards TSD for Furnaces and Boilers, Sept. 2007
Gas Boilers	DOE Standards TSD for Furnaces and Boilers, Sept. 2007
Average Non ENERGY STAR Price	
Clothes Washers	D&R International 2009, estimate based on data from major retailer websites
7/1/09 Criteria	D&R International 2009, estimate based on data from major retailer websites
1/11/09 Criteria	D&R International 2009, estimate based on data from major retailer websites
Dishwashers	D&R International 2009, estimate based on data from major retailer websites
8/11/09 Criteria	D&R International 2009, estimate based on data from major retailer websites
7/1/11 Criteria	D&R International 2009, estimate based on data from major retailer websites
Refrigerators	D&R International 2009, estimate based on data from major retailer websites
Freezers	D&R International 2009, estimate based on data from major retailer websites
Room Air Conditioners	D&R International 2009, estimate based on data from major retailer websites
WH -- Gas-Condensing	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Elec Heat Pump	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Hi-Eff Gas Storage	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Hi-Perf Gas Storage	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Gas Tankless	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Solar (electric)	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Solar (gas)	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
Central Air Conditioners	EPA ENERGY STAR CACs Savings Calculator accessed 5/09
Air Source Heat Pumps	EPA ENERGY STAR ASHPs Savings Calculator accessed 5/09
Oil Furnaces	DOE Standards TSD for Furnaces and Boilers, Sept. 2007
Gas Furnaces	DOE Standards TSD for Furnaces and Boilers, Sept. 2007
Oil Boilers	DOE Standards TSD for Furnaces and Boilers, Sept. 2007
Gas Boilers	DOE Standards TSD for Furnaces and Boilers, Sept. 2007

Potential Rebate Level	
Clothes Washers	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
7/1/09 Criteria	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
1/11/09 Criteria	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
Dishwashers	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
8/11/09 Criteria	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
7/1/11 Criteria	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
Refrigerators	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
Freezers	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
Room Air Conditioners	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
WH -- Gas-Condensing	D&R International 2009, estimate based on rebate amounts for products with similar price premiums and savings
WH -- Elec Heat Pump	D&R International 2009, estimate based on rebate amounts for products with similar price premiums and savings
WH -- Hi-Eff Gas Storage	D&R International 2009, estimate based on rebate amounts offered by existing programs
WH -- Hi-Perf Gas Storage	D&R International 2009, estimate based on rebate amounts offered by existing programs
WH -- Gas Tankless	D&R International 2009, estimate based on rebate amounts offered by existing programs
WH -- Solar (electric)	D&R International 2009, estimate based on rebate amounts offered by existing programs
WH -- Solar (gas)	D&R International 2009, estimate based on rebate amounts offered by existing programs
Central Air Conditioners	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
Air Source Heat Pumps	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
Oil Furnaces	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
Gas Furnaces	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
Oil Boilers	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
Gas Boilers	D&R International 2009, estimate based on rebate amounts in ENERGY STAR database
Annual kWh savings	
Clothes Washers	DOE ENERGY STAR Appliance Savings, Prepared by D&R International 1/09
7/1/09 Criteria	D&R International Analysis 3/09
1/11/09 Criteria	D&R International Analysis 3/09
Dishwashers	DOE ENERGY STAR Appliance Savings, Prepared by D&R International 1/09
8/11/09 Criteria	D&R International Analysis 4/09
7/1/11 Criteria	D&R International Analysis 4/09
Refrigerators	DOE ENERGY STAR Appliance Savings 1/09
Freezers	DOE ENERGY STAR Appliance Savings 1/09
Room Air Conditioners	DOE ENERGY STAR Appliance Savings 1/09
WH -- Elec Heat Pump	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Solar (electric)	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
Central Air Conditioners	EPA Savings Calculator. Assumed 1000 cooling hours.
Air Source Heat Pumps	EPA Savings Calculator. Assumed 1000 cooling hours, 2080 heating hours.

Annual gas therm savings	
Clothes Washers	DOE ENERGY STAR Appliance Savings, Prepared by D&R International 1/09
7/1/09 Criteria	D&R International Analysis 3/09
1/11/09 Criteria	D&R International Analysis 3/09
Dishwashers	DOE ENERGY STAR Appliance Savings, Prepared by D&R International 1/09
8/11/09 Criteria	D&R International Analysis 4/09
7/1/11 Criteria	D&R International Analysis 4/09
Gas Furnaces	EPA Savings Calculator. Assumes default values but without Programmable Thermostat
WH -- Gas-Condensing	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Hi-Eff Gas Storage	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Hi-Perf Gas Storage	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Gas Tankless	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
WH -- Solar (gas)	ENERGY STAR Residential Water Heaters: Final Criteria Analysis
Gas Boilers	EPA Savings Calculator. Assumes default values but without Programmable Thermostat
Annual Oil Savings	
Oil Furnaces	EPA Savings Calculator. Assumes default values but without Programmable Thermostat
Oil Boilers	EPA Savings Calculator. Assumes default values but without Programmable Thermostat

Appendix C
ENERGY STAR Products Covered under the Department of Energy's Appliance Standards Program

The table below includes all current residential ENERGY STAR products, and identifies those that are covered under the DOE Appliance Standards Program. Authority for the federal minimum efficiency standards was articulated through the following legislation:

- Energy Policy and Conservation Act (EPCA) of 1975
- National Appliance Energy Conservation Act (NAECA) of 1987
- Energy Policy Act (EPACT) of 1992
- Energy Policy Act (EPACT) of 2005
- Energy Independence and Security Act (EISA) of 2007

ENERGY STAR Residential Products	EPCA (1975)	NAECA (1987)	EPACT (1992)	EPACT (2005)	EISA (2007)
Appliances					
Refrigerator	Y				
Freezer	Y				
Dishwasher	Y				
Clothes Washer	Y				
Dehumidifier	Y				
Air Cleaner					
Heating & Cooling					
Room Air Conditioner		Y			
Furnace	Y				
Central AC/Air Source Heat Pump	Y				
Geothermal Heat Pump					Y
Boiler			Y		
Programmable Thermostat					
Ceiling Fan				Y	
Ventilating Fan					
Water Heaters					
Gas Storage	Y				
Gas Condensing	Y				
Gas Tankless			Y		
Heat Pump	Y				
Solar					
Electronics					
Computer and Office Equipment					
Television		Y			
Set-top Boxes					
Other Electronics (phones, etc.)					
Ext. Power Supplies & Battery Chargers				Y	
Lighting					
Compact Fluorescent Lamps (CFLs)				Y	
Residential Light Fixtures					
Solid State Lighting Luminaires					
Decorative Light Strings					
Building Envelope					
Reflective Roof Materials					
Windows, Doors, Skylights					

Appendix D:
Appliance Recycling Program Design Considerations

This Appendix is intended to provide background information for planning an appliance recycling program. While not a comprehensive how-to guide, it provides information on some of the common program elements as well as resources for getting started.

Defining Program Goals

The most common reason for implementing an appliance recycling program is to achieve energy savings by removing older, inefficient products from use. This is particularly important when promoting the purchase of new refrigerators/freezers or room air conditioners, so the current units – if still operable – don't end up becoming a second unit elsewhere. The U.S. DOE estimates that over 22 percent of homes have two or more refrigerators. Typically the second unit is an older model that previously served as the household's primary unit. When retailers deliver a new refrigerator they often offer to move the current unit to the garage or basement in lieu of hauling it away. So without an intervention to spur the pick-up and recycling of old refrigerators being replaced, a significant number of these older inefficient units will live on and contribute to increased household energy costs.

Recycling and Upgrade (Trade In/Trade Up)

A recycling and upgrade program encourages consumers to retire and recycle working but older and less efficient products, and replace them with newer, ENERGY STAR qualified models. Efficiency programs have focused their efforts on refrigerators/freezers and room air conditioners because early retirement and recycling of these appliances yields attractive energy and environmental benefits:

- Federal standard changes in recent years have resulted in an influx of much more efficient models to the market. (See table on following page.) All newly manufactured ENERGY STAR® labeled full-sized refrigerators must be at least 20 percent more efficient than the current federal standard – and this means they are 61% more efficient than pre-1993 units. In addition, new ENERGY STAR qualified freezers are required to be at least 10 percent more efficient than the minimum federal standard – an improvement of 47% compared to pre-1993 units.
- Both products contain chlorofluorocarbons (CFCs), which require proper capture and handling by certified recyclers and legally may not be vented or released,
- They are frequently found in residential households in quantities of two or more, increasing the savings opportunities.

DOE is promoting the recycling of old appliances as part of its ENERGY STAR Make a Cool Change Campaign. Consumers can learn how much it costs to operate older units, what recycling options are available, and the benefits of purchasing new ENERGY STAR qualified replacements. Campaign information and tools are available at: www.energystar.gov/recycle.

REFRIGERATOR ENERGY EFFICIENCY CHANGES	
Standard/Spec Change	**Description**
1993 Federal Standard	30% more efficient than the 1990 standard
1997 ENERGY STAR	20% more efficient than the 1993 standard (44% better than the 1990 standard)
2001 Federal Standard	30% more efficient than the 1993 standard (51% better than the 1990 standard)
2001 ENERGY STAR	10% more efficient than the 2001 standard (56% better than the 1990 standard)
2004 ENERGY STAR	15% more efficient than the 2001 standard (58% better than the 1990 standard)
2008 ENERGY STAR	20% more efficient than the 2001 standard (61% better than the 1990 standard)

Common Program Elements

Appliance recycling programs have been used for many years by utilities as a way of capturing energy savings. As a result, a number of best-management practices have emerged.

1. **Planning and Partnership Building:** It is helpful to consult with firms experienced in running recycling programs, as well as with retailers, when designing a recycle and replace program. Most utility-run recycling programs outsource the refrigerator collection and recycling to an outside recycling services company that picks-up old units at the request of consumers. Increasingly, utilities are exploring ways to coordinate these programs with retailers, as they can be an important partner to help with public awareness, provide a convenient location for recycling drop-off programs, process instant rebates, and offer convenient product pick-up at customer homes. The utility typically pays for the cost to properly recycle old units, which can vary based on the type of product and the number of units recycled through the program. Per-unit costs will be higher for smaller programs with relatively low recycling volume, especially when there are no other large programs in the vicinity. If significant economies of scale are present, or a program is planned for at least three years, it can be worthwhile for a recycler to create a new recycling facility in a region.

2. **Marketing/Consumer Education:** For a recycling program to be effective, consumers and other stakeholders must understand the need for recycling and how to participate in the program. Outreach is typically accomplished through a combination of web content, advertisements, and retail point of purchase materials. If executing a turn-in event for room air conditioners it is important to adequately promote the date and location. Past programs have conducted broadcast and print advertising, installed high-visibility signage at the point of purchase, and used public relations to achieve earned media coverage.

3. **Product Collection:** Program sponsors have learned that it is very important to make the collection process convenient for consumers. The two options are pick-up or drop-off service. A residential pick-up service is more consumer-friendly, but the drop-off option lowers costs. However, drop-off is typically only an option for smaller appliances such as room air conditioners. The drop-off program is frequently associated with the purchase of a new unit and is time-limited. The program sponsor arranges a date and location and has customers bring in their old room air conditioners in exchange for a coupon or discount toward the purchase or a new one. To offer collection of larger appliances at the consumer's home, implementers may consider:

    - Partnering with retailers who can pick up older appliances when delivering replacement models
    - Working with a recycler to offer pick-up on scheduled days or upon customer request
    - Hiring a third party to handle collection

    In most refrigerator recycling programs, the recycler handles pick-up from the customer's home. Collected units are then delivered to the recycling center. Some efficiency programs are starting to coordinate with appliance retailers to handle pick-up at the time newly purchased refrigerators are being delivered. Before loading the unit to be recycled on the truck most programs require that the unit be disabled so it is impossible for it to be re-sold or re-used.

4. **Recycling:** Once the products are at the recycling facility, the components are separated and recycled. In the cases where the most advanced recycling techniques are used, ninety eight percent of the unit is recycled and only two percent goes to the landfill. Appliance recycling companies are required by law to capture the refrigerant as it contains CFCs. The capture of CFCs from the foam is an additional voluntary step undertaken by partners of the U.S. Environmental Protection Agency's Responsible Appliance Disposal Program to help avoid further destruction of the ozone layer and global warming. (See sample contract language below for more specifics on what to require of recyclers to ensure proper disposal.)

Implementation Overview: Sample Recycling Programs

Midwest Energy Efficiency Alliance (MEEA): A past MEEA refrigerator program offered a $50 rebate through retailers for consumer purchases of efficient refrigerators, in addition to a $50 bounty to purchasers that removed the old product.

Duke Power: In 2008 Duke Power ran a room air conditioner recycling program in its Cincinnati service-territory in cooperation with a number of area retailers. This program offered a $50 rebate on the purchase of a new ENERGY STAR qualified room air conditioner when an old, working unit was recycled. This program was highly-successful – ending several weeks early due to higher than predicted participation.

California Utilities: For many years, the California utilities have encouraged their customers to retire working second refrigerators. They provided financial incentives or "bounties" ranging from $50 - $75 per unit. Customer service has been very important to the success of these

programs. Customers were typically allowed to select their pick-up time, and they received confirmation letters and e-mails reminding them when the recycler would arrive. These programs were not tied specifically to the purchase of a new refrigerator. Pick-up and recycling was handled by a third party recycler, though in recent years this program has been opened up to retailers that can demonstrate that their recycling program meets the requirements of the utility program. Allowing retailers to participate reduces the number of trucks on the road, and makes it more convenient for the consumer as the recycling takes place at the same time a new product is delivered.

New York State Energy Research and Development Authority (NYSERDA): The NYSERDA Keep Cool program issued a $75 bounty to consumers who purchased an ENERGY STAR qualified room air conditioner and turned in an older, still-functioning room air conditioner. Consumers brought their old room air conditioners to a local retail store. Over 600 retail partners throughout New York participated. More than half of the consumers who participated in the trade-in program learned of the opportunity from a retailer.

For a complete list of current refrigerator and freezer recycling programs throughout the U.S., visit the ENERGY STAR Make a Cool Change Campaign, found in the "Refrigerators & Freezers" section at www.energystar.gov/recycle.

Finding and Contracting with Recyclers

Programs may want to contact the agency responsible for recycling in their state to gather local information about existing recycling programs and service providers.

There are several companies that offer turn-key recycling programs for utilities and other efficiency program sponsors. The two largest are:

- **Appliance Recycling Centers of America, Inc. (ARCA).** ARCA provides full-service appliance recycling programs to utility companies throughout North America. (www.arcainc.com)
- **JACO Environmental.** JACO provides curb-side and retailer recycling programs for utilities in the Western United States and in select eastern markets. (www.jacoinc.net)

Programs can also contract directly with local Scrap Metal Recyclers. The Institute of Scrap Recycling Industries (ISRI) keeps a list of its members on its Web site (www.isri.org). Click on the "Member Directory" button and search for "Ferrous (all grades)." Searches can be done by state. Not all scrap recyclers have the capacity to capture refrigerants, oils, etc., so specifically ask for these services when inquiring.

Finally, national and state recycling organizations and networks can be a source of information about appliance service providers. The National Recycling Coalition, Inc. (NRC) (www.nrc-recycle.org) includes a number of affiliated state recycling organizations. NRC's affiliated organizations, as well as non-affiliated ones, are listed below:

State Recycling Organization	Web Address (if available)
Alabama Recycling Coalition	
Alaskans for Litter Prevention and Recycling	http://www.alparalaska.com/
Arizona Recycling Coalition	http://arizonarecyclingcoalition.com/
Associated Recyclers of Wisconsin	http://www.arow-online.org
Association of Idaho Recyclers	http://groups.yahoo.com/group/idahorecyclers/
Association of Ohio Recyclers	http://www.aor-omex.org
Association of Oregon Recyclers	http://www.aorr.org/
Association of Vermont Recyclers	http://www.vtrecyclers.org/
California Resource Recovery Association	http://www.crra.com
Carolina Recycling Association	http://www.cra-recycle.org/
Colorado Association for Recycling	http://www.cafr.org/
Connecticut Recyclers Coalition	http://www.ctrecyclers.org/
Georgia Recycling Coalition	http://myecoville.com/us/ga/home
Illinois Recycling Association	http://www.illinoisrecycles.org/
Indiana Recycling Coalition	http://www.indianarecycling.org
Kansas Organization of Recyclers	http://www.kskor.org/
Maryland Recyclers Coalition	http://marylandrecyclers.org/index.htm
Michigan Recycling Coalition	http://www.michiganrecycles.org/
Missouri Recycling Association	http://www.mora.org/
Nebraska State Recycling Association	http://www.recyclenebraska.org/
New Mexico Recycling Coalition	http://www.nmrecycle.org/
New York State Association for Reduction, Reuse and Recycling	http://www.nysar3.org/
North Dakota Solid Waste and Recycling Association	http://www.ndswra.org/
Oklahoma Recycling Association	http://www.recycleok.org/
Recycle Florida Today	http://www.recyclefloridatoday.org/
Recycling Association of Minnesota	http://www.recycleminnesota.org/
Recycling Coalition of Utah	https://utahrecycles.org/
Recycling Montana	http://recyclemontana.org/
South Dakota Solid Waste Management Association	http://www.sdswma.org/
State of Texas Alliance for Recycling	http://recyclingstar.org/
Tennessee Recycling Coalition	http://www.trc-online.org/
The Professional Recyclers of Pennsylvania	http://www.proprecycles.org/
Virginia Recycling Association	http://www.vrarecycles.org/
Washington State Recycling Association	http://www.wsra.net
Wyoming Solid Waste and Recycling Association	http://www.wswra.com/

When contracting with a recycler to handle refrigerators or freezers, states and territories may wish to use the Sample Contract Language included below, to ensure recycling is handled properly and in accordance with the guidelines established by the EPA's Responsible Appliance Disposal Program.

Sample Contract Language[i] for Recycling of Refrigerators and Freezers

Contractor agrees not to re-sell or re-use any refrigerators and freezers collected, and to properly recycle these refrigerators including disposing of refrigerators and freezers in a way that meets or exceeds the federal law. Federal law stipulates (40 CFR Part 82 Subpart F) that refrigerant must be recovered prior to dismantling or disposal and that all mercury, used oil and PCBs be properly managed and stored (40 CFR Parts 273, 279, 761 and summarized below). Contractor also agrees to comply with additional state laws, where applicable, which may have additional requirements. For example, in 2006, California introduced a law requiring entities that remove materials such as mercury, used oils, polychlorinated biphenyls PCBs, and refrigerants from appliances are certified by the State (AB 2277). Similarly, some states require that certain durable appliance materials be recycled. At this time (February 2009), no federal or state laws require that appliance insulation foam be recovered; however, the common practice of shredding and/or landfilling of foam represents a significant source of ozone-depleting substance (ODS) and greenhouse gas (GHG) emissions which could be avoided through foam recovery. Contractor agrees to make available licenses and certifications to prove compliance with federal and state guidelines upon request.

Refrigerant

Refrigerant or coolant must be properly recovered using U.S. Environmental Protection Agency (EPA)-certified refrigerant recovery equipment. Once recovered, refrigerant must either be reclaimed by an EPA-certified reclaimer for reuse, or destroyed using approved destruction technologies. Technicians disposing of/dismantling appliances are not required to be certified. However, disposal companies must certify to their EPA regional office that they have acquired and are properly using refrigerant recovery/recycling equipment.

Mercury

As a toxic substance, mercury waste must be recovered from switches and relays found in appliances prior to their disposal. These wastes must be handled by a qualified recovery facility that has appropriate hazardous waste management permits. At approved facilities, mercury wastes are managed in accordance with applicable federal, state, and local hazardous waste regulations (e.g., waste must be properly packaged prior to transport). For more information on the proper storage of hazardous waste, visit http://www.epa.gov/epawaste/hazard/tsd/index.htm.

Used Oil

If improperly handled, used oil can leak into groundwater and major waterways and pollute drinking water sources. Used oil from appliances may contain toxic chemicals and heavy metals, which are dangerous to human health. Therefore, used oil must be recovered from appliances and

properly managed in accordance with federal standards (40 CFR 279) and any applicable state regulations. Once used oil is recovered, it must be stored in appropriate containers that are in good condition, with no visible leaks. Additionally, any refrigerant contaminating the used oil must be recovered to the fullest extent possible, and reclaimed or destroyed (as explained above). Used oil from refrigerated appliances cannot be mixed with used oil from other sources.

PCBs

Polychlorinated biphenyls (PCBs) are regulated by EPA as toxic substances; they may cause cancer, liver damage, and can have negative impacts on the neurological development of children, the human reproductive system, the immune system, and the endocrine system. PCBs can be found in capacitors (used to store electrical charge in the compressor) of refrigerated appliances. If the capacitor fails to state "contains no PCBs" or the capacitor (or appliance) was manufactured before 1979, one should assume that the capacitor contains PCBs. By law, PCB capacitors may not be stored for more than one year. EPA-approved storage and disposal companies can assist you in properly handling any PCB capacitors recovered from appliances. To find an EPA-approved PCB storage facility near you, visit http://www.epa.gov/pcb/pubs/comstor.htm.

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[i] *Source: The Environmental Protection Agency's Responsible Appliance Disposal Program, http://www.epa.gov/Ozone/partnerships/rad/ . For more information about joining the RAD Program and to receive a Standard Partnership Agreement, please contact Evelyn Swain at swain.evelyn@epa.gov or 202-343-9956.*