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A Proposal for  
Inclusion in the

# American Recovery and Reinvestment Plan

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8 January 2009



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## Purpose

This brief proposal is a demonstration that a modest investment by the Federal Government will yield enormous long-term benefits for the entire U.S. populace, including as much monetary relief as a tax cut to every household and business.

## Goals

- Reduce America's consumption of electricity and natural gas by increasing residential and commercial building operating efficiency
- Create long-term U.S. major appliance manufacturing jobs
- Train and employ presently unemployed persons
- Increase retail sales of major appliance and other energy efficient devices
- To do all of the above in a cost effective and efficient manner



## Overview of the Suggested Program

- Federal Government funded program to replace incandescent lights with compact fluorescent and other highly efficient lights as well as replacing fixed temperature thermostats with programmable thermostats.
- Create a Federally funded database of major residential appliance models and serial numbers, along with energy consumption data on each, in order to deliver a computer program that will calculate energy savings and payback time to allow a selected replacement in a specific locality.
- Create a Federally funded program to train a workforce of energy auditors and then to hire these people, through private contractors, to do energy audits of all possible residential and commercial buildings.



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## Overview, Continued

- Create a Federally supported and partially subsidized program, for the poor and elderly and to provide loans to residential and commercial building owners, through existing banks, at a government guaranteed low interest rate to make energy efficient replacements. The approved replacements would be focused on replacements for which the monthly cost of the loan would be the same or less than the energy savings, thus creating a net \$0.00, or better, out of pocket for the home / building owner.
- Replaced devices would be removed and responsibly recycled.



## Overview of Residential Energy Savings

Device	Number of Units to Replace	Cost of Replacement	Cost to U.S. Government	Annual Energy Savings	Percent Reduction of Total Consumption	U.S. Jobs Created <sup>2</sup>
Energy Efficient Bulbs	3.3 Billion	\$ 13 Billion	\$ 13 Billion	\$ 9 Billion	2.44%	Negligible
Programmable Thermostats	64 Million	\$ 5.2 Billion	\$ 5.2 Billion	\$ 8 Billion	2.10%	6,000 +
On-demand Water Heaters <sup>1</sup>	34 Million	\$ 30 Billion	\$ 6 Billion	\$ 4 Billion	1.00%	25,000 +
Refrigerators	6.8 Million	\$ 6.6 Billion	\$ 1.2 Billion	\$550 Million	0.09%	5,500 +
Furnaces	5.2 Million	\$ 13 Billion	\$ 2.6 Billion	\$ 1.1 Billion	0.18%	7,500 +
Air Conditioning	2.6 Million	\$ 6.5 Billion	\$ 1.2 Billion	\$550 Million	0.15%	3,300 +
Insulation & Weather-seal	17 Million	\$ 12 Billion	\$ 2.4 Billion	\$ 2.4 Billion	0.39%	18,000 +
		\$ 86.3 Billion	\$ 31.5 Billion	\$25.6 Billion	6.35%	65,000 +

<sup>1</sup> Assumes 17% poor and elderly are provided at no cost and 3% credit loss

<sup>2</sup> Estimate of direct job creation only, not secondary or tertiary job creation



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## Program Description

### Efficient Lighting and Programmable Thermostats

- Existing retail stores would register to participate.
- Participating stores would agree to participate in a device return and recycling program.
- Customers could turn in incandescent bulbs and fixed temperature thermostats for suitable replacement at no charge and complete a brief personal information form. Alternatively, a licensed installer would install the thermostat for a fixed fee plus the cost of the thermostat.
- Store would verify identity on the form, attach a duplicate sales receipt showing price and credit, then return the documentation to Program Operator Processing Center for prompt payment.
- Program Operator would provide pick-up and recycling of old devices.
- Program Operator would perform quality control and program auditing.



## Program Description Refrigerators

- Existing retail stores would register to participate.
- Participating stores would agree to participate in a device return and recycling program.
- Customer would provide store with the make, model, and serial number of the old refrigerator. The store would use the created database to determine the time required to pay back the purchase of various models that the retailer carries using the Government sponsored lending facility. If the payback period is less than 10 years, the entire purchase could be consummated using only the Government loan funds. [Subject to the approved lending requirements]
- The participating store would be required to deliver the new refrigerator and collect the old refrigerator.
- Program Operator would provide pick-up and recycling of old devices.
- Program Operator would perform quality control and program auditing.



## Program Description

### Major Systems:

### Furnaces, Air Conditioning, and Water Heaters

- Plumbing and heating contractors would register to participate in the program.
- Participating contractor would agree to participate in a device return and recycling program.
- The contractor would use the created database to determine the time required to pay back the purchase and installation of various models that the contractor carries using the Government sponsored lending facility. If the payback period is less than 10 years, the entire purchase could be consummated using only the Government loan funds. [Subject to the approved lending requirements]
- The participating contractor would be required to deliver the new equipment and collect the old unit.
- Program Operator would provide pick-up and recycling of old devices.
- Program Operator would perform quality control and program auditing.



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## Program Description

### Residential and Commercial Building Audits

- Program Operator will identify areas of the country where the energy saving will be greatest, and hence the payback period would be shorted, for replacement of various residential and commercial building systems as well as for upgrades and repairs.
- Program Operator will promote a Free Energy Audit Program.
- Program Operator will utilize existing qualified energy auditors and train additional energy auditors to respond to demand for audits in the area. Training should focus on the unemployed and chronically unemployed.
- Energy Auditors will perform audits and recommend replacements, improvements, and repairs that should be done to improve efficiency as well as provide an estimate of the payback period for each.

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## Program Description

### Residential and Commercial Building Audits, continued

- Energy Auditor could replace fixed temperature thermostats on the spot if this has not already been done.
- Energy Auditor would provide a list of participating stores and contractors in the area.
- Program Operator would pay Energy Auditor businesses / contractors a preset fee for each residential audit and a preset fee per sq. ft. for commercial audits.



## Program Operations and Operator

### Responsibilities:

- Develop and maintain a web-based database of old and current model appliances together with cost of operations, considering local energy cost, and household size when applicable. The database would have a calculator function to allow consumers, retailers, and contractors to determine payback times and to estimate eligibility for the various programs.
- Promote the program locally, regionally, and nationally as the program grows.
- Manage a database of participating retailers, contractors, and auditors.
- Develop a training program and curriculum for Energy Auditors, and make the program available to any competent training institution. At least 10,000 will be needed nationally.

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## Program Operations and Operator

### Responsibilities, continued:

- Confirm that contractors and other training facilities are available for installation and repair personnel. If training is not available, Program Operator will facilitate such training.
- Manage and audit payments to participants.
- Manage and audit the quality of work performed.
- Develop and manage a comprehensive collection system for all returned devices.
- Confirm that all devices are recycled in an environmentally sound manner.



## Policy Issues to Consider

Should all purchased/ funded appliances be U.S. made?

How fast should the program seek to complete portions of the conversions?

Is the Federal Government willing to make the required 10- to 15- year commitment to the program for it to reach full efficacy?

## Other Items

All products provided through the program should bear a seal  
“Not for Resale or Barter under penalty of Federal law.”



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