



CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

April 7, 2003

H.R. 1346 **Federal Government Energy Management Improvement Act**

*As ordered reported by the House Committee on Government Reform
on March 20, 2003*

SUMMARY

H.R. 1346 would amend several standards for energy efficiency and conservation throughout the federal government. Such standards would apply to federal buildings, vehicle fleets, and equipment procurement. The bill also would provide permanent authorization to use energy savings performance contracts (ESPCs) and would expand their use. The expansion would allow agencies to use an ESPC to construct replacement buildings by committing to pay private contractors a portion of the budget savings expected from reduced operations, maintenance, and energy costs at such new buildings. Additionally, the bill would require three new studies for the Congress.

CBO estimates that the indefinite authorization and expansion of ESPCs would increase direct spending by about \$75 million in 2004 and \$2.8 billion over the 2004-2013 period. Additionally, CBO estimates that, assuming appropriation of the necessary amounts, implementing H.R. 1346 would cost \$80 million in 2004 and \$400 million over the 2004-2008 period.

H.R. 1346 contains no intergovernmental mandates or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA). Any costs incurred by state, local, or tribal governments would result from complying with conditions of federal aid.

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of H.R. 1346 is shown in the following table. The costs of this legislation fall within budget functions 270 (energy) and 800 (general government).

	By Fiscal Year, in Millions of Dollars				
	2004	2005	2006	2007	2008

CHANGES IN SPENDING SUBJECT TO APPROPRIATION

Electricity Metering at Federal Buildings					
Estimated Authorization Level	80	80	80	80	80
Estimated Outlays	80	80	80	80	80

CHANGES IN DIRECT SPENDING

Permanent Authorization of ESPCs					
Estimated Budget Authority	75	104	107	109	111
Estimated Outlays	64	100	106	109	111
Expansion of ESPCs					
Estimated Budget Authority	35	70	105	140	175
Estimated Outlays	11	42	77	112	147
Total Estimated Direct Spending Under H.R. 1346					
Estimated Budget Authority	110	174	212	249	286
Estimated Outlays	75	142	183	221	258

NOTE: ESPCs = Energy Savings Performance Contracts.

BASIS OF ESTIMATE

For this estimate, CBO assumes H.R. 1346 will be enacted by the end of fiscal year 2003. We assume that the necessary amounts will be appropriated for each year, and that outlays will occur at historical rates for similar programs.

Spending Subject to Appropriation

H.R. 1346 would establish energy conservation goals and requirements for the government, including, where practical, hourly electricity metering in all federal buildings by 2010. The bill also would require that three studies for the Congress be performed by various agencies. CBO estimates that implementing H.R. 1346 would cost \$80 million in 2004 and \$400 million over the 2004-2008 period, assuming appropriation of the necessary funds.

Energy Conservation at Federal Agencies. H.R. 1346 would amend several energy conservation goals and requirements for the federal government. Most of those goals, such as reducing energy use by 2 percent per year relative to 2000 consumption and purchasing energy-efficient products when economical, are being done under current executive orders. Where practical, the bill would require that hourly electricity meters be installed at all federal buildings by 2010. Such meters would provide data at least once daily and measure hourly consumption of electricity. The data would be available to facility energy managers.

Based on information from the Department of Energy (DOE), we assume that it would only be economical to meter 20 percent of the government's inventory of 500,000 buildings and that installing meters would cost, on average, \$4,000 per building. We assume that meters would be installed in 20,000 buildings per year until 2008, when the project would be complete. Thus, we estimate that implementing the metering provisions of H.R. 1346 would cost \$80 million in 2004 and \$400 million over the 2004-2008 period.

Based on experience in the private sector, metering the hourly electricity use of buildings can lead to reduced energy consumption and reduce costs enough to recoup the cost of installing meters within two to four years. It is possible that this requirement could lead to a future reduction in appropriations for federal building energy use, but any such savings would depend on how metering information is used by federal agencies. Additionally, metering can reveal where energy use is high, but capital investment and other changes in how federal buildings consume energy would likely be needed to achieve savings. In any case, any savings are not likely to be significant over the next five years because most of the new metering and required capital investment would not be completed until the end of that period or after 2008.

Studies by Federal Agencies. H.R. 1346 would require three separate studies for the Congress. Specifically it would require:

- DOE to study the energy conservation effects of telecommuting;
- The General Services Administration (GSA) to study the effects of reducing petroleum consumption in federal fleets; and
- The General Accounting Office (GAO) to study the participation of small business in the construction of oil and gas pipelines.

CBO estimates that it would cost about \$150,000 per study and that the studies would take one year to complete. Thus, we estimate that implementing those studies would cost about \$450,000 in 2004, assuming the availability of appropriated funds.

Direct Spending

H.R. 1346 would provide permanent authorization for the use of energy savings performance contracts and expand their use. Overall, CBO estimates that those provisions would increase direct spending by \$75 million in 2004 and \$2.8 billion over the 2004-2013 period.

Permanent Authorization of ESPCs. Currently, federal agencies can enter into an ESPC, a specific type of long-term contract, for the purchase of energy efficiency equipment, such as new windows and lighting. Using such equipment can reduce the energy costs for a facility. When using an ESPC, the savings from reduced energy bills are used to pay for the purchase of the new equipment over several years. The commitment to make such payments is made when the ESPC is entered into. Thus, consistent with governmentwide accounting principles, CBO believes that the budget should reflect that commitment as new obligations at the time that an ESPC is signed. Currently, agencies can use ESPCs to purchase new equipment over a 25-year period without an appropriation for the full amount of the purchase price.

DOE estimates that agencies entered into ESPCs valued over \$800 million since 1988. CBO estimates that, because the federal building inventory is aging, those contracts would continue to be used over time at roughly the same rate currently used, or \$75 million in 2004 and increasing after that. Thus, we estimate that extending the authorization for ESPCs would increase direct spending by about \$64 million in 2004 and \$1.1 billion over the 2004-2013 period.

Expanding ESPCs for Building Construction. H.R. 1346 would expand the use of such contracts to cover the purchase of a new building if the cost of the new building is less than the present value of estimated savings from lower costs of operations, maintenance, and energy consumption.

A November 2000 report from GSA's Office of the Inspector General estimates that it would take several billion dollars to bring the federal building inventory up to appropriate operations, maintenance, and energy efficiency standards. Thus, we assume that the opportunity for cost savings that could be generated from reduced operations, maintenance, and energy expenses at new buildings would be significant. We expect that the new authority provided by the bill would be used only in a few cases in the first few years but that, as buildings continue to deteriorate and requirements for energy efficiency continue to increase, the authority would be used at an increasing rate.

DOE has plans to use the new authority under this provision to build a new facility in New Mexico at an estimated cost of \$35 million. While the precise number of new facilities planned for construction that could qualify for funding under the authority that would be provided by the bill cannot be determined at this time, CBO estimates that this new authority

would be used at least 15 times over the next five years at an estimated cost of about \$400 million over the 2004-2008 period. We expect that the use of the funding mechanism would grow after 2008 and that total spending over the 2004-2013 period would be about \$1.7 billion.

ESTIMATED IMPACT ON STATE, LOCAL, AND TRIBAL GOVERNMENTS

H.R. 1346 contains no intergovernmental mandates as defined in UMRA. Section 302 of H.R. 1346 might impose some costs on recipients of federal grants by encouraging the increased use of certain recycled materials in federally funded construction projects that use cement or concrete, including highway construction projects. Since this provision would apply only to projects that receive federal funding, it is a condition of federal aid rather than a mandate.

CBO cannot determine the exact costs or savings that states might realize as a result of this provision because of uncertainties in how the federal government would implement the new language. However, we do not expect federal agencies would make substantial changes to existing policies regarding the use of recycled materials, so the impact probably would be small. Those federal policies already encourage states to use recycled materials, and at least half of the states already have policies in place providing for their use in highway and construction projects. According to industry and government sources, states without such policies either already routinely use the materials or do not have a readily available source for the materials.

ESTIMATED IMPACT ON THE PRIVATE SECTOR

This bill contains no new private-sector mandates as defined in UMRA.

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