2. Direct Expenditures and Tax Expenditures

Overview

This chapter discusses Federal programs through which the Federal Government provides direct financial benefits to energy producers or consumers, with receipt of the benefits directly linked to energy production or consumption. Two types of Federal programs are considered in this chapter: direct expenditures and tax expenditures. Direct expenditures are payments made by the Federal Government to particular energy producers or consumers because they are economically disadvantaged or have undertaken to produce or consume energy in a way that has desirable social consequences. Energy tax expenditures are broadly defined as provisions of the tax code that permit special, beneficial tax treatment to taxpayers who produce, consume, or save energy in ways that are judged to be in the public interest.

Direct expenditures do not involve large sums of money in comparison with the Federal civilian budget or the value of U.S. energy consumption. Federal direct expenditures in this chapter include two grant programs: the Low Income Home Energy Assistance Program (LIHEAP), administered by the U.S. Department of Health and Human Services (DHHS), and the Building Technology Assistance Program (which consists of the Weatherization Assistance Program and the State Energy Program), administered by the U.S. Department of Energy. In 1999, total annual appropriations for the two programs are about $1.4 billion, compared with annual U.S. expenditures for end-use energy of $547 billion in 1995 (1999 dollars).[26] Given that these subsidies are grants, their value is clearly stated in Federal budget documents.

Three types of tax expenditures are included in this chapter: the exclusion of interest on energy facility bonds from Federal income taxes, the exclusion from income of conservation subsidies provided by public utilities, and a Federal income tax credit for clean-fuel vehicles and property. The total value of the three subsidies amounted to $270 million in 1999 in terms of revenue losses. A more comprehensive group of tax expenditures is discussed in the Energy Information Administration's September 1999 report, *Federal Financial Interventions and Subsidies in Energy Markets 1999: Primary Energy*. The current report focuses on tax expenditures related to electricity and other non-primary energy.

Direct Expenditures

Low Income Home Energy Assistance Program

LIHEAP, originally established in 1981, is a block grant program under which the Federal Government gives States, the District of Columbia, U.S. territories, and Indian tribal organizations annual grants to provide home energy assistance for needy households. It is administered through DHHS, but most of the important decisions about the

[26]This is the most recent year for which data are available. Energy Information Administration, *State Energy Price and Expenditure Report 1995*, DOE/EIA-0376(95) (Washington, DC, August 1998).

program's implementation are left to the grantees. LIHEAP assistance does not reduce eligibility or benefits under other aid programs.[27]

For fiscal year 1999, LIHEAP is the largest program among direct expenditure energy subsidies, with an expenditure of $1.255 billion (Table 1), including $155 million in emergency funds for cooling assistance. LIHEAP disburses block grants to the States, which in turn provide assistance to low-income households for payment of utility bills and for weatherization of residences.[28] The precise eligibility criteria vary from State to State. In general, recipients must have income that is less than 150 percent of the poverty level for their State, or less than 60 percent of the State's median income. No household with income below 110 percent of the poverty guidelines may be excluded.

Table 1. Funding for Direct Expenditure Energy Subsidies, Fiscal Year 1999
(Million 1999 Dollars)

Program	Expenditure
Low Income Home Energy Assistance Program[a]	1,255
Building Technology Assistance Program	
Weatherization Assistance Program	133
State Energy Program	33
Total	**1,421**

[a]In 1999, an additional $155 million in emergency funds was made available to States with LIHEAP recipients that experienced severe heat. The funds were released from an appropriation of $300 million for energy emergency contingency purposes.

Source: Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2000* (Washington, DC, 1999).

The effects of LIHEAP are difficult to quantify, in part because the actual administration of the program is in the hands of the States, which do not apply uniform eligibility criteria or collect uniform information from recipients. Based on sample survey data, about 46 percent of LIHEAP recipients heat their homes with natural gas, 28 percent with electricity, 23 percent with petroleum products, and the balance (4 percent) with other fuels.[29] Table 2 shows the estimated division of direct expenditures for LIHEAP and DOE's Building Technology Assistance Program by fuel type. (In addition, $155 million used for emergency cooling assistance is allocated to electricity.)

In fiscal year 1997, the average LIHEAP household consumed about 7.8 percent less energy than the national average but 5.7 percent more energy than the average low-income household (Figure 1). Consumption of natural gas was 3.4 percent below the national average but 6.2 percent above the average for low-income households. LIHEAP households consumed 16.7 percent less electricity than the national average but had the same rate of consumption as the average low-income household. For fuel oil, LIHEAP households consumed less than both the national average

[27]Federal rules also require outreach activities, coordination with DOE's Weatherization Assistance Program, and annual audits. Grantees decide the mix and dollar range of benefits, choose how benefits are provided, and decide what agencies will administer program components. In addition to funds used for heating and/or cooling assistance, a reasonable amount of the funds must be set aside by grantees for energy crisis intervention. Up to 15 percent of grantees' allotments (up to 25 percent with a waiver) may be used for low-cost residential weatherization or other energy-related home repair.

[28]Information on LIHEAP is drawn from the following sources: Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2000* (Washington, DC, 1999); CRS Issue Brief for Congress, *94-211: The Low-Income Home Energy Assistance Program: A Fact Sheet* (updated October 23, 1998); Fax from Leon Litow, *LIHEAP Home Energy Notebook, Fiscal Year 1997* (draft report, 1999); and material accessed from web sites www.acf.dhhs.gov/programs/liheap and www.ncat.org/liheap.

[29]Home Energy Data, web site www.acf.dhhs.gov/programs/liheap.

and the average for low-income households. Excluding weatherization grants, LIHEAP functions as a subsidy to energy consumption.

Table 2. Estimated Funding for Direct Expenditure Energy Subsidies by Fuel Type, Fiscal Year 1999
(Million 1999 Dollars)

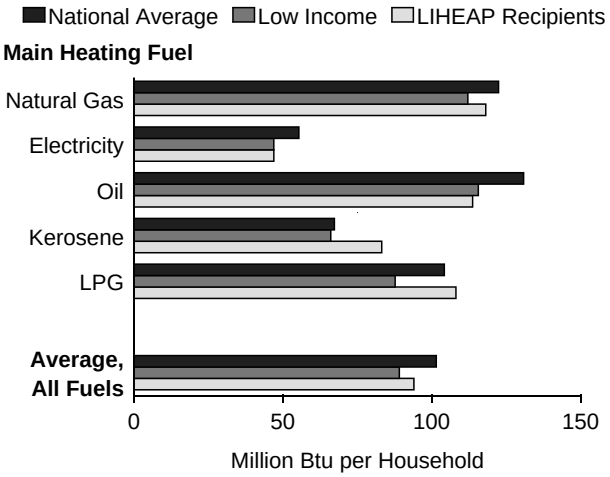
Fuel	Low Income Home Energy Assistance Program	Building Technology Assistance Program
Oil	255	0
Natural Gas	501	0
Coal	0	0
Nuclear	0	0
Renewables	40	0
Electricity[a]	459	0
Conservation	0	166
Total	**1,255**	**166**

[a]Includes an emergency expenditure of $155 million for cooling assistance that is allocated to electricity.

Sources: Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2000* (Washington, DC, 1999). The LIHEAP total was separated by fuel using data from web site www.acf.dhhs.gov/programs/liheap.

In fiscal year 1996, the average annual LIHEAP benefits per recipient ranged from $54 to $403 for heating assistance, from $77 to $623 for winter crisis aid, and from $15 to $145 for cooling assistance.[30] The national average annual benefit for households receiving heating and/or winter crisis aid was estimated at $180, a 9-percent decrease from the fiscal year 1995 average. In fiscal year 1996, benefits accounted for 91 percent of LIHEAP spending and administrative costs 9 percent. Fewer than 25 percent of eligible households received LIHEAP benefits. In fiscal year 1996, more than 4.3 million recipients received heating assistance, 109,000 households received cooling assistance, 31,000 households received summer crisis aid, and 59,000 households received weatherization assistance. LIHEAP recipients used only about 0.4 percent less energy than the national average household for heating but 48 percent less energy for cooling, mirroring the pattern of LIHEAP assistance.

Figure 1. Annual Energy Consumption of the Average U.S. Household, Average Low-Income Household, and LIHEAP Recipients by Main Heating Fuel, 1997



Source: Fax from Leon Litow, *LIHEAP Home Energy Notebook, Fiscal Year 1997* (draft report, 1999).

Building Technology Assistance Program

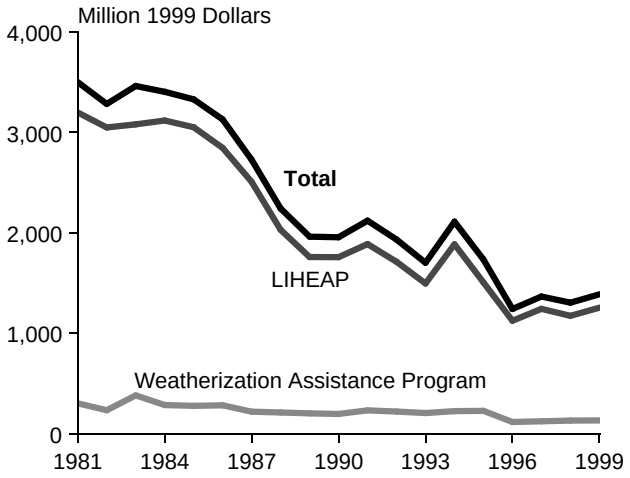
Also included in the direct expenditure category is DOE's program of grants for conservation and technical assistance, with fiscal year 1999 funding of $166 million (nominal dollars) (Table 1). The Building Technology Assistance Program supports two grants programs. The Weatherization Assistance Program supports the weatherization of 76,900 low-income homes, with an appropriation of $133 million for fiscal year 1999 and $154

[30]Home Energy Data, web site www.acf.dhhs.gov/programs/liheap.

million for fiscal year 2000 (approximately $1,700 to $2,000 per household minus overhead and administration costs). The State Energy Program, which supports grants to promote innovative State energy efficiency and renewable energy activities, is funded at $33 million for fiscal year 1999 and $37 million for fiscal year 2000. In contrast to LIHEAP, the DOE program subsidizes energy conservation and is designed to reduce energy consumption.[31]

Figure 2 shows the time profile of appropriations for LIHEAP and the DOE Weatherization Assistance Program. The total appropriations for the two programs have declined from $3.50 billion (1999 dollars) in fiscal year 1981 to $1.33 billion in fiscal year 1999.

Figure 2. Annual Expenditures for LIHEAP and DOE's Weatherization Assistance Program, Fiscal Years 1981-1999



Note: Figure does not include funding for DOE's State Energy Program.

Source: Low-Income Energy Programs Funding History, web site www.ncat.org/liheap/tables/lhhist.htm.

Tax Expenditures

Definitions

Tax expenditures are reductions in Government revenues resulting from preferential tax treatment for particular taxpayers. They are termed "tax expenditures" because their objectives could also be reached by a direct expenditure of Government funds. In this report, the term "tax expenditures" is applied to preferential tax treatment provided by Federal income tax laws, as requested in the study definition. The concept could also be applied to the income tax laws of other jurisdictions, such as States and municipalities, and it could be extended to include other taxes, such as excise taxes. The tax expenditure provisions reviewed in this chapter are Federal income taxes that are applied preferentially to energy.

Many tax expenditure programs are functionally equivalent to direct expenditure programs. The basis for selecting one or the other approach to provide benefits to taxpayers is not always clear. It is not obvious why the Congress chooses to adopt tax expenditures for some programs and direct expenditures for others, but political and policy considerations as well as the specific characteristics of the programs may play a role.[32] For instance, tax expenditures may be less subject to annual review in the normal budget cycle and may be less visible than direct expenditure programs in the budget process.

[31]Information on the DOE Weatherization Assistance Program and the State Energy Program is drawn from Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2000* (Washington, DC, 1999), and U.S. Department of Energy, *Fiscal Year 2000 Congressional Budget Request*.

[32]Some of the factors related to the two approaches are discussed in M. Feldstein, "A Contribution to the Theory of Tax Expenditures: The Case of Charitable Giving," in H.J. Aaron and M.J. Boskin, *The Economics of Taxation* (Washington, DC: The Brookings Institution, 1980), pp. 99-122.

Tax expenditures occur when actual tax treatment for particular kinds of taxpayers deviates from standard tax treatment. There is disagreement as to what constitutes standard treatment, both in principle and in practice. As a result, lists of tax expenditure items and associated values can and do differ. With minor modification, the list and values used in this report are those prepared by the U.S. Treasury Department and reported by the Office of Management and Budget (OMB) in the budget of the U.S. Government.[33]

Individual Energy Tax Expenditures

The largest source of tax expenditures for end-use energy is the exclusion from gross income of interest on private activity bonds issued by State or local governments to finance certain energy facilities, often built by investor-owned utilities, from Federal taxation (Table 3).[34] The resulting loss of tax revenues in 1999 amounted to $110 million—the amount of Federal income tax that would have been paid on interest earnings from taxable bonds for energy facilities that are otherwise similar to those that are tax free. The outlay equivalent of the tax expenditure amounted to $155 million. Outlay equivalents measure "the amount of outlay that would be required to provide the taxpayer the same after tax income as would be received through the tax preference."[35]

Table 3. Estimated Federal Energy Tax Expenditures by Type of Expenditure, Fiscal Year 1999
(Million 1999 Dollars)

Expenditure	Revenue Loss	Outlay Equivalent
Exclusion of Interest on Energy Facility Bonds	110	155
Exclusion from Income of Conservation Subsidies Provided by Public Utilities	80	110
Tax Credit and Deduction for Clean-Burning Vehicles	80	105
Total	**270**	**370**

Source: Office of Management and Budget, *Analytical Perspectives, 2000* (Washington, DC, 1999).

The second largest tax expenditure for end-use energy in 1999 consisted of a Federal tax exemption for subsidies provided by public utilities to non-business customers to reduce the costs of energy conservation measures. The value of the revenue loss associated with this subsidy was $80 million, and the outlay equivalent value was $110 million.

The third tax expenditure included here consists of a tax credit of 10 percent for purchases of electric vehicles. The credit is capped at $4,000. Owners of clean-fuel storage facilities are also eligible for the credit. The value of this subsidy in 1999 was $80 million in terms of revenue lost and $105 million in terms of outlay equivalent.

Unreported Tax Expenditures

The reporting of tax expenditures was mandated by the Congressional Budget Act of 1974 (Public Law 93-344). The Budget of the U.S. Government defines tax expenditures as "revenue losses due to preferential provisions of the

[33]Office of Management and Budget, *Analytical Perspectives, 2000* (Washington, DC, 1999), pp. 105-126.
[34]These bonds are distinct from the tax-exempt bonds issued by State and municipal electric utilities to fund ordinary capital investments.
[35]Office of Management and Budget, *Analytical Perspectives, 2000* (Washington, DC, 1999), p. 116.

Federal tax laws, such as special exclusions, exemptions, deductions, credits, deferrals, or tax rates."[36] Although the concept behind what constitutes a tax expenditure is clear, the determination of what exactly is a preferential provision is subject to interpretation. In preparing this section on energy-related tax expenditures, the Energy Information Administration relied entirely on the definitions of tax expenditures presented in OMB documents. Expenditures below the U.S. Treasury's *de minimis* amount ($5 million) are not reported in standard OMB budget documents and therefore are not included in this report.

[36]Office of Management and Budget, *Analytical Perspectives, 2000* (Washington, DC, 1999), p. 105.