[JOINT COMMITTEE PRINT]

DESCRIPTION OF ENERGY TAX CREDIT BILLS (S. 750 and S. 1288)

SCHEDULED FOR A HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY AND AGRICULTURAL TAXATION

OF THE

COMMITTEE ON FINANCE

ON OCTOBER 19, 1981

PREPARED FOR THE USE OF THE

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BY THE STAFF OF THE

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INTRODUCTION

The bills described in this pamphlet have been scheduled for a public hearing on October 19, 1981, by the Subcommittee on Energy and Agricultural Taxation of the Senate Finance Committee.

There are two bills scheduled for the hearing: S. 750 (relating to tax credits for investments in energy efficiency and fuel conservation projects) and S. 1288 (relating to energy tax credits for certain investments by commercial businesses).

The first part of this pamphlet contains a summary of the bills. This part is followed by a more detailed description of each bill, including present law, issues, an explanation of the provisions of each bill, their effective dates, and estimated revenue effects.

I. SUMMARY

Present Law

In addition to the generally applicable 10-percent investment tax credit, a 10-percent nonrefundable tax credit is provided for investments in alternative energy property (sec. 48(l)(3)), specially defined energy property (sec. 48(l)(5)), recycling equipment (sec. 48(l)(6)), and cogeneration equipment (sec. 48(l)(14)). Each item in these categories is specifically defined and none includes either a general provision permitting a credit based on energy savings or a provision allowing a credit for investments with respect to office buildings or retail stores.

S. 750—Senator Wallop, et al

The bill would expand availability for the energy tax credits for investments in alternative energy property, specially defined energy property, recycling equipment, and cogeneration equipment, increase these credits from 10 percent to 20 percent, and extend these credits through 1986. The bill also would provide a new credit for certain energy efficiency and fuel conservation expenditures based on the amount of energy saved by the investment.

S. 1288—Senator Durenberger, et al

The bill would modify the definition of specially defined energy property to include eleven new energy saving devices, increase the level of the credit from 10 to 20 percent, and extend the credit through 1986. Eligibility would be extended from items installed in connection with industrial or commercial processes to property installed in connection with any existing industrial, retail or commercial process, activity, facility, building or equipment. The bill also would provide a 20-percent energy credit for insulation installed in or on an existing industrial, retail, or commercial building.

II. DESCRIPTION OF BILLS

1. S. 750—Senators Wallop, Baucus, Boren, Chafee, Long, et al.

Energy Credit for Energy Efficiency and Fuel Conservation Projects

Present Law

In addition to the regular investment tax credit and cost recovery allowances, present law provides a nonrefundable energy tax credit for investments in certain business energy property. The amount of the credit generally is 10 percent of the taxpayer's cost of acquiring or constructing eligible property. The credits generally expire after December 31, 1982; however, the expiration date is extended through 1990 for taxpayers with projects that require substantial planning and construction if certain affirmative commitments have been made in a timely fashion.

Eligible property includes alternative energy property, which includes boilers and burners fueled by an alternate substance (i.e., other than oil, natural gas, or one of their products), equipment that uses an alternate substance to make a synthetic liquid, gaseous, or solid fuel, certain coal conversion equipment, and related handling and pollution control equipment.

Specially defined energy property also qualifies for the energy tax credit. Items specified as specially defined energy property include recuperators, heat wheels, heat exchangers, and automatic energy control systems. To be eligible, the principal purpose of the equipment must be to reduce the amount of energy consumed in an existing commercial or industrial process. Under Treasury regulations, a commercial or industrial process is defined as a method of producing a desired result by chemical, physical or mechanical action (Treas. Reg. § 1.46–9(f)). In addition to the specified items, the Secretary may add additional items of qualifying property if certain standards are satisfied. That authority has not yet been exercised.

Recycling equipment, cogeneration equipment, solar or wind energy property, hydroelectric equipment, shale oil equipment, biomass property, qualified intercity buses, and equipment for producing natural gas from geopressured brine are also eligible for the energy investment tax credit.

Issues

The following issues arise in connection with the bill:

1. Should the amount of the business energy credit be increased to 20 percent for certain types of energy property?

2. Should the expiration date of the credit for certain types of energy property be extended from December 31, 1982, to December 31, 1986?

3. Should a new 20-percent energy credit apply to property used to reduce the total amount of natural gas or oil consumed by a facility, or equipment per unit of output?

4. Should the definitions of specially defined energy property, alternative energy property, alternate substances, recycling equipment, solid waste, as cogeneration equipment, be modified to extend the business energy credit to additional types of property?

5. Should the rule excluding public property from the definition of certain types of energy property apply if the property is installed in connection with a small power production facility or a qualifying cogeneration facility?

6. Should alternative energy property, recycling equipment, qualified hydroelectric generating property, and cogeneration equipment qualify without regard to present law requirements limiting the credit to the incremental cost of reducing energy rather than increasing operating capacity?

7. Should certain property associated with eligible energy property be added as an additional item of qualifying property?

Explanation of the Bill

In general, the bill would increase the energy investment credit to 20 percent for alternative energy property (except geothermal and ocean thermal property), specially defined energy property, and recycling equipment, and extend the expiration date of the credit for this property to December 31, 1986. The bill would create a new category of energy property—qualified industrial energy efficiency property (QIEEP)—that would be eligible for a 20-percent energy investment credit. In addition, the bill would amend the definition of certain types of energy property eligible for the energy credit.

Qualified industrial energy efficiency property (QIEEP)

QIEEP must be an integral part of a modification to, or replacement of, all or part of an existing manufacturing, production, or extraction facility, commercial or industrial process, or item of equipment. The modification or replacement must not increase the total amount of natural gas or oil (other than waste gases and petroleum coke or pitch) consumed by the facility, process, or equipment per unit of output. The property must result in the use of less energy per unit of output by the facility, process, or equipment. Also, the modification must result in a reduction of energy consumed by the process, facility, or equipment of at least 1,000 barrels of oil a year (or the equivalent).

The credit would be reduced if the cost of the energy savings were excessive or the energy savings warranted investment without regard to the credit. If the energy saving were less than $10 per barrel of oil equivalent (BOE), the 20-percent credit would be reduced by 2 percentage points for each dollar of BOE cost less than $10. If the energy saving were more than $60 per BOE, the credit would be $60 multiplied by the amount of saving. From $10 through $60 BOE, the full 20-percent energy investment credit would apply.

Qualified property must be new tangible property for which depreciation is allowable, have a useful life of 3 or more years, and be directly related and utilized for energy reduction or conversion. Public utility property would not be eligible. Qualified property must be installed on or in connection with an existing facility. For the QIEEP credit, a facility is existing if industrial or commercial operations were conducted at the site as of January 1, 1981.

No property is eligible for the QIEEP credit if (1) the property is otherwise energy property eligible for an energy investment credit, (2) the replaced property is not retired (except for standby use), or (3) the replacement is not on the same or an adjacent site.

The rules governing eligibility for the regular investment credit would apply with a few modifications. For example, as with other energy credits the exclusion of a building and its structural components would be disregarded. Boilers fueled by oil or gas would be eligible for QIEEP notwithstanding their ineligibility for the regular credit. There would be no partial credits; all qualified property with a useful life of 3 or more years would receive the full 20-percent QIEEP credit. The credit could be applied against 100 percent of tax liability.

The manner in which the QIEEP credit would operate may be demonstrated by the following example. Assume a taxpayer made \$1,000,000 of qualified expenditures to modernize and improve the efficiency of an existing industrial process and that none of the investments were eligible for other energy credits. The tentative QIEEP credit would be \$200,000 (20% × \$1,000,000). To determine the credit actually allowable, the taxpayer would have to determine the amount of energy saved (assuming no change in output) and any change in output. If the investment saved 10,000 barrels of oil (or the equivalent thereof) (i.e., 10,000 BOE's), then the full 20-percent of credit would be available since the credit for each BOE saved is between \$10 and \$60. (That is 20% credit × \$1,000,000 ÷ 10,000 BOE saved=\$20 of credit per BOE). If the investment saved only 2,000 BOE, then the credit would be reduced from \$200,000 to \$120,000 as follows: 20% credit × \$1,000,000 ÷ 2,000 BOE=\$100 credit per BOE; therefore, the alternative credit amount is computed as \$6 × 2,000 BOE's saved= \$120,000. If the investment saved 40,000 BOE's the credit would be reduced from \$200,000 to \$100,000 as follows: 20% credit × \$1,000,000 ÷ 40,000 BOE=\$5 credit per BOE; therefore, the reduced credit amount which is \$5/\$10 × 20% × \$1,000,000=\$100,000 applies.

If the output is increased by more than 10 percent, then the credit calculated as above is reduced in proportion to the increase in capacity.

Amendments to energy property definitions

Alternative energy property.—The bill also would amend the definition of alternative energy property to include equipment for converting alternate substances into electricity, heat treating furnaces, melt furnaces, and certain modification equipment. In addition, the bill would amend the definition of alternate substance to include petroleum coke, petroleum pitch, synthetic fuels, and any other product produced from an alternate substance. The Act would also amend the requirements for determining whether an alternate substance comprises the primary fuel for purposes of qualifying as alternative energy property.

Specially defined energy property.—With respect to specially defined energy property, the bill would specify six additional items of qualifying property: including (1) industrial insulation, (2) industrial heat pumps, (3) modifications to burners, combustion systems or process furnaces, (4) batch operation conversion equipment, (5) product separation and dewatering equipment, and (6) fluid bed dryers and calciners. Also, the bill would permit property to qualify as specially defined energy property even though used in reducing energy consumed in an industrial or commercial activity rather than in an industrial or commercial process. Thus, specially defined energy property installed in retail stores and in office buildings would qualify for the credit. Under the bill, any items added by the Secretary in the future would be treated as qualified energy property as of October 1, 1978.

Recycling equipment.—The bill would amend the definition of recycling equipment to include property for unloading, transfer, storage, and reclaiming from storage of solid waste. The bill would also add as eligible property certain fuel processing equipment and equipment to recover and store other reusable resources and materials without regard to the rule under present law excluding equipment used in a process after the first marketable product is produced. The definition of solid waste would be amended to include semi-solid and liquid materials, including materials resulting from industrial, commercial, agricultural, or community activities.

Cogeneration equipment.—The bill would substantially amend the definition of cogeneration equipment. Under the bill, cogeneration equipment would be expanded to include property used as part of a system for the sequential generation of mechanical power, as well as electric power, in combination with qualified energy. The bill would repeal the present law limitations on the use of oil or gas and permit equipment to qualify without regard to the present law rule limiting the credit to incremental capacity.

Biomass property.—With respect to the definition of biomass property, the bill would amend the definition of alternate substance to exclude source separated, separately, collected, recyclable waste paper.

Associated property.—The bill would add a new category of energy property referred to as "associated property". For alternative energy property, associated property would mean property to enable utilization of an alternate substance. For specially defined energy property, associated property would mean property reasonably necessary to reduce energy consumed or heat wasted by the process or activity. For recycling equipment, associated property would mean property reasonably necessary to achieve the sorting, preparation, or recycling of solid waste. For cogeneration equipment, associated property would mean property reasonably necessary to achieve the intended energy savings. For QIEEP, associated property would mean property reasonably necessary to reduce energy per unit of output. The energy percentage for the energy property it was installed in connection with.

Public utility property.—The bill would amend the present law provision excluding public utility property from the definition of certain types of energy property. Under the bill, public utility property would not be eligible for the energy credit for QIEEP. The bill also would add an exception to the general rule excluding public utility property from the energy credit for property installed in connection with a qualifying small power production facility or a qualifying cogeneration facility (within the meaning of the Federal Power Act).

"Existing" facilities.—Under present law, certain equipment qualifies only if it is installed in connection with an existing process or facility. A facility is "existing" under present law if 50 percent or more of the basis for the facility is attributable to construction before October 1, 1978. Under the bill, a facility would be considered "existing" if industrial or commercial operations were conducted at that geographic location as of October 1, 1978. Contrary to present law, a process carried on in an existing facility on October 1, 1978, would not cease to be treated as such solely because substantial capital expenditures are made to modify that process after October 1, 1978.

Replacement property.—The bill would limit the availability of the credit for replacement property. Under the bill no replacement equipment would qualify as energy property if the replaced property is not retired from service (except for property retained as standby or temporary replacement property during periods the new property is inoperable because of an emergency or repair) or the replacement property is placed in service at a different site.

Incremental costs.—Under Treasury Regulations, only the incremental cost of reducing energy (rather than increasing operating capacity) generally is eligible for the credit. The bill would delete this incremental cost limitation for alternative energy property, recycling equipment, qualified hydroelectric generating property, and cogeneration equipment, and clarify the existing rules for determining incremental costs for other property.

Effective Date

In general, the bill would apply to taxable years ending after December 31, 1980.

The amendments with respect to QIEEP would apply for property acquired by the taxpayer and placed in service after December 31, 1980 but before January 1, 1987, and property constructed by the taxpayer to the extent of construction expenditures made after 1980 and before 1987.

For QIEEP to which the affirmative commitment rule under the 1980 Act would apply, the credit would apply to property placed in service before January 1, 1995.

Revenue Effect

Difficulty in defining and measuring the mix of inputs and outputs, and energy saved per unit of output, and in identifying the related investment which achieved the energy savings all contribute to uncertainty in estimating the revenue impact of this bill. However, preliminary estimates by the Treasury Department indicate that this bill would reduce fiscal year budget receipts by approximately $2.5 billion in 1982 increasing to approximately $5 billion in 1986.

2. S. 1288—Senators Durenberger, Symms, et al.

Commercial Business Energy Tax Credit Act of 1981

Present Law

In addition to the regular investment tax credit and cost recovery allowances, present law provides an energy investment tax credit for investments in specially defined energy property. The specific items enumberated in section 48(l)(5) as specially defined energy property are (1) recuperators, (2) heat wheels, (3) regenerators, (4) heat exchangers, (5) waste heat boilers, (6) heat pipes, (7) automatic energy control systems, (8) turbulators, (9) preheaters, (10) combustible gas recovery systems, (11) economizers, and (12) modifications to alumina electrolytic cells. In addition, the Secretary may specify other property as eligible for the credit, if the item is similar to any of the listed items and if production and use of the item will result in a net reduction in consumption of oil or natural gas. Other factors that the Secretary must take into account in making a decision whether to add an item to the list of specially defined energy property include other federal programs that would accomplish the same objective, the effects on the environment of making and using the property, public health or safety, estimates of increased use as a result of the specification, estimates of whether sufficient production capacity exists to satisfy increased demands resulting from specification of an item as eligible for the credit, the useful life of the item, and the amount of oil and natural gas used directly or indirectly in the manufacture of such item and other items necessary for its use.

Each item, whether specifically listed in the Code or added by the Secretary, must have the principal purpose of reducing the amount of energy consumed in an existing (as of October 1, 1978) industrial or commercial process and must be installed in connection with an existing industrial or commercial facility. Treasury regulations interpret the phrase "industrial or commercial process" as requiring an activity in which a desired change is accomplished by chemical, physical or mechanical means. (Treas. Reg. § 1.48–9(f).) Thus, laundering and food preparation are commercial processes; however, retail sales, general office activities and leasing of residential space are not processes. For example, an automatic energy control system designed to reduce energy consumption in heating or cooling an office building *is not* specially defined energy property under the Treasury regulations but an automatic energy control system that reduces energy consumed in a manufacturing process *is* specially defined energy property.

Present law does not provide any energy tax credit for investments in insulation installed in or on non-residential property.

Issues

Five issues arise in connection with the bill. The first is whether the interpretation of "industrial or commercial process" contained in the Treasury's regulations should be expanded. The second is whether additional items should be added to the list of specially defined energy property. The third is whether the energy credit for specially defined energy property should be increased from 10 to 20 percent. The fourth is whether it should be extended beyond 1982. The fifth is whether a 20-percent tax credit should be provided for insulation installed in or on an existing industrial, retail or commercial building or facility.

Explanation of the Bill

The bill would make five changes in the business energy tax credit provisions. First, eleven new items would be added to the list of specially defined energy property. Secondly, the credit would apply to any listed property installed to reduce energy consumption in any existing industrial, retail, or commercial process, activity, facility, building or equipment rather than only property installed in connection with an industrial or commercial process. Thirdly, the credit for specially defined energy property would be increased from 10 percent to 20 percent; and fourthly, the credit would be extended through 1986. Finally, a 20-percent energy tax credit would apply to "installation property."

Treasury regulation regarding "industrial or commercial process"

The first modification to the credit for specially defined energy property reverses the Treasury regulation that limits the meaning of "industrial or commercial process" to "a method of producing a desired result by chemical, physical, or mechanical action." Under the new rule, specified property that lowers energy consumption in any existing industrial, retail or commercial process, activity, facility, building or equipment would be eligible for the credit. Thus, investments with respect to retail stores or office buildings could qualify. The bill retains the present law definition of "existing." Thus, only investments in connection with a process, activity, facility, building, or piece of equipment in existence as of October 1, 1978, could qualify. The bill does not extend the specially defined energy property credit to property installed in connection with residential rental property. Energy investments in residential property would continue to be dealt with exclusively through the residential energy credit provisions of section 44C.

Eligible items

The second modification would add eleven new items to the list of specially defined energy property. These additions would be:

(1) an energy management or control system or device;

(2) a heat pump apparatus, cooling tower, condenser or evaporator which modifies or replaces existing components in heating, ventilating, air-conditioning or refrigeration system;

(3) an energy redistribution system, device or component for heating or cooling, including a duct, pipe, vent, pump or fan which exchanges the air, gas or fluids within or between rooms to increase or decrease temperature or humidity;

(4) a furnace or boiler replacement burner designed to achieve a reduction in the amount of fuel consumed as a result of increased combustion efficiency;

(5) a device or control package retrofitted to an electric motor to improve its efficiency;

(6) a mechanical or programmable timer or motion detector to turn on or off energy using equipment;

(7) a meter or submeter which displays or records the cost or quantity of energy usage;

(8) a replacement, modification or conversion of lighting system;

(9) a device which modifies refrigeration equipment;

(10) an energy storage system, including a heat sink; and

(11) equipment used in the preparation, storage, cooking, display, or serving of food or cleaning of dishware which incorporates design features specifically engineered to reduce energy consumption, and which replaces similar equipment of the taxpayer purchased before January 1, 1976.

The effect of these additions to the list of specially defined energy property would be to extend the energy credit to most energy saving modifications of a building or plant's heating, cooling or lighting systems and to modifications of refrigeration and food preparation systems.

Increase in and extension of credit

The bill also would increase the credit for specially defined energy property from 10 percent to 20 percent for property installed after 1980 and would extend the credit through 1986.

Credit for insulation property

The final amendment in the bill would add a 20-percent credit for "insulation property" to list of business energy tax credits. The credit would apply to insulation property installed in or on an existing industrial, retail, or commercial building or facility after December 31, 1980 and before January 1, 1987, to reduce the heat loss or gain of the building or facility. The requirement that insulation reduce the heat loss or gain of a building or facility would limit the credit to installation that would result in a net energy savings through net reductions in heating and cooling costs. The present law definition of an existing facility would be retained. Therefore, only insulation added to buildings or facilities in existence on October 1, 1978, would be eligible for the credit. As with the other business energy credits, the insulation credit would not apply to improvements to residential real estate.

Insulation property would be defined to include:

(1) insulation materials installed as part of the building envelope including the wall, ceiling, floor, and roof,

(2) insulation materials installed in connection with mechanical system equipment, ducts and piping,

(3) heat reflecting and heat absorbing window and door materials and reflective and heat absorbing window and door films and coatings,

(4) storm or thermal windows or doors for the exterior of a building,

(5) thermal curtains which separate areas of different temperatures,
(6) vestibules,
(7) exterior skylights which have one or more sheets of glazing or other type of panel, and
(8) caulking or weatherstripping of an exterior door, window, or skylight.

Effective Date

The provisions of the bill would apply to taxable years beginning after December 31, 1980. Thus, the new credits and increased rates generally would be available for property placed in service after December 31, 1980; however, transition rules similar to those in section 48(m) would apply to property under construction on January 1, 1981. The credits for specially defined energy property and insulation property would expire on December 31, 1986.

Revenue Effect

The revenue estimate is not yet available.

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