Department of Legislative Services

Maryland General Assembly
2000 Session

FISCAL NOTE
Revised

House Bill 20 (Delegate Taylor, *et al.*)
Ways and Means

Maryland Clean Energy Incentive Act

This bill exempts from the sales and use tax: (1) clothes washers, room air conditioners, and refrigerators that meet or exceed applicable Energy Star efficiency guidelines; and (2) specified energy efficient heating and cooling equipment and fuel cell electric generating equipment. The bill also allows a motor vehicle excise tax credit for qualified electric vehicles and hybrid vehicles. In addition, the bill allows a credit against the State income tax for specified solar energy property and for electricity produced from qualified energy resources. The Maryland Energy Administration, in consultation with manufacturers, retailers, and public interest groups, is required to develop voluntary labeling and public information materials to identify products eligible for the tax incentive provided for by the bill.

The bill takes effect July 1, 2000. Section 2, which deals with solar energy property, applies to all taxable years beginning after December 31, 1999. Section 3, which deals with electricity produced from qualified energy resources, applies to all taxable years beginning after December 31, 2000.

Fiscal Summary

State Effect: Potential general fund revenue loss of between $1 to $2 million beginning in FY 2001. Future year losses could be larger to the extent that more taxpayers take advantage of the tax incentives provided by the bill. Potential special fund (Transportation Trust Fund) revenue loss. The actual impact depends on the number of corporations claiming the tax credits proposed in the bill. Expenditure increase of $10,000 in FY 2001.

Local Effect: Potential local government revenue loss. To the extent that credits are taken by corporations, local revenues would decline as a portion of the corporate income tax is

distributed to the Transportation Trust Fund (TTF) to which a distribution to local governments is made.

Small Business Effect: Potential minimal. To the extent that the bill creates additional demand for the products and services provided by small businesses involved in "clean energy technologies," these businesses will be positively impacted. Because of the nature of the technology involved it is assumed that there will be a small initial impact. If there is an increase in demand over time because the cost of the technology declines, the impact on small businesses will increase.

Analysis

Current Law: An individual or corporation may take a credit against the State income tax for a taxable year in the amount equal to: (1) 40% of the deduction allowed to the individual or corporation for the cost of qualifying clean-fuel vehicle property as defined and limited by sec. 179A of the Internal Revenue Code (IRC) and placed in service during the taxable year; (2) 80% of the deduction allowed to the individual or corporation for the cost of any truck or van with a gross vehicle weight of more than 5,000 pounds, but less than 10,000 pounds, that is qualifying clean-fuel vehicle property under IRC sec. 179A and is placed in service during the taxable year; and (3) 40% of the credit allowed for a qualified electric vehicle, as defined and limited by IRC sec. 30, placed in service during the taxable year.

The credits allowed may not be claimed: (1) by an alternative fuel provider; or (2) for a vehicle, unless the claimant has already met or exceeded any State or federal laws or regulations governing clean-fuel vehicle or electric vehicle purchases or conversions applicable during the taxable year.

The amount of the credits allowed may not exceed the State income tax for that taxable year, calculated before application of the credits, but after application of the other allowable credits. The unused amount of the credit for any taxable year may not be carried over to any other taxable year. The credit is scheduled to expire after June 30, 2000.

Background: Current federal law allows a variety of credits and deductions for the use of energy efficient technology, including:

- a 10% energy credit for the cost of new property and equipment that (1) uses solar energy to generate electricity, to heat or cool a structure, or to provide solar heat; or (2) is used to produce, distribute, or use energy derived from a geothermal deposit, but only in the case of electricity generated by thermal power, up to the electric transmission stage;

- the exclusion from income of the value of any subsidy provided by a public utility for the purchase of an energy conservation measure. An "energy conservation measure" is any installation or modification primarily designed to reduce consumption of electricity or natural gas or to improve the management of energy demand with respect to a dwelling unit (IRC sec. 136);

- a 10% tax credit for the cost of a qualified electric vehicle, up to a maximum credit of $4,000. A qualified electric vehicle is a motor vehicle that is powered primarily by an electric motor drawing current from rechargeable batteries, fuel cells, or other portable sources of electric current;

- certain costs of qualified clean-fuel vehicle property may be expensed and deducted when such property is placed in service (IRC sec. 179a). Qualified clean-fuel vehicle property includes motor vehicles that use certain clean burning fuels (natural gas, liquified natural gas, liquified petroleum gas, hydrogen, electricity and any other fuel at least 85% methanol, ethanol, and any other alcohol or ether). The maximum amount of the deduction is $50,000 for a truck or van with a gross vehicle weight of over 26,000 pounds or a bus with seating capacities of at least 20 adults; $5,000 in the case of a truck or van with a gross vehicle weight of between 10,000 and 26,000; and $2,000 in the case of any other motor vehicle. Qualified electric vehicles do not qualify for the clean-fuel vehicle deduction. No credit is provided for hybrid vehicles; and

- an income tax credit for the production of electricity from either qualified wind energy or qualified "closed-loop" biomass facilities (IRC. sec. 45). The credit is equal to 1.7 cents (1.5 cents plus adjustments for inflation since 1992) per kilowatt hour of electricity produced from these qualified sources during the ten-year period after the facility is placed in service. Closed-loop biomass is the use of plant matter, if the plants are grown for the sole purpose of being used to generate electricity. The term does not include waste materials (including but not limited to, scrap wood, manure, and municipal or agricultural waste) or standing timber used to produce electricity. In order to claim the credit, a taxpayer must own the facility and sell the electricity produced by the facility to an unrelated party.

At least nine states have some form of sales tax exemption for energy-efficient products or renewable energy fuels or equipment. In addition, at least 11 states have some form of income tax credit for clean energy products, fuels, or equipment.

The Environmental Protection Agency and the U.S. Department of Energy have developed the "Energy Star" labeling program to help consumers identify the most energy-efficient products available on the market. Virtually all new computers now carry the label, but for most other products the Energy Star designation represents the top tier in energy efficiency in the market. During 1998, Energy Star appliance sales in Maryland captured a smaller share of the market than was achieved by Energy Star products nationwide.

This bill is loosely based on proposed federal legislation (H.R. 2380) that was introduced in June 1999 and is intended to: (1) encourage sellers of electric power in the State to derive some portion of their energy from clean and renewable sources; and (2) provide residents with tax incentives for the purchase of clean energy technologies.

State Fiscal Effect: Under the bill, the following products would qualify the purchaser or producer for various tax incentives:

- energy efficient electric appliances;
- fuel cell electric generating equipment;
- electric and hybrid light vehicles (cars, minivans, SUV's, light trucks);
- solar photovoltaic power and water heating systems;
- highly efficient gas and electric heating and cooling systems; and
- generation of electricity using qualified energy resources.

Sales Tax Exemption

Appliances: Those products in the following categories that meet or exceed Energy Star efficiency requirements are proposed for sales tax exemption:

- clothes washers purchased on or after July 1, 2000, but before July 1, 2003;
- room air conditioners purchased on or after January 1, 2001, but before July 1, 2004;
- refrigerators (standard size) purchased on or after July 1, 2001, but before July 1, 2004.

During 1998, Energy Star products captured 4.5% of sales of new clothes washers in Maryland, 12% of sales of room air conditioners, and 15% of sales of refrigerators. New, more stringent energy efficiency standards are scheduled to go into effect nationwide in October 2000 for room air conditioners and in July 2001 for refrigerators. Energy Star criteria for these two products are also expected to be adjusted upward at that time and the Energy Star share of the market for new refrigerators and room air conditioners is likely to fall back below 10%.

It is estimated that the cost of this provision could result in a revenue decrease of between $1 and $2 million per year.

Fuel cell electric generating equipment: The purchase of new fuel cells -- equipment using an electrochemical process to generate electricity and heat -- would be exempt from the sales and use tax provided the equipment is purchased before July 1, 2004. A qualifying device must have an electricity-only generation efficiency of at least 35% and a generating capacity of at least two kilowatts.

According to Potomac Resources, Inc. (PRI), there is no fuel cell electric generating equipment presently on the market. However, it is expected that by 2004, there could be some on the market.

Heating and cooling systems: The following high-efficiency electric and gas equipment would be exempt from the 5% sales and use tax provided it was purchased before July 1, 2004:

- natural gas heat pumps with a coefficient of performance for heating of at least 1.25 and cooling of at least 0.70;
- electric heat pump hot water heaters with an Energy Factor of at least 1.7;
- electric heat pumps with a heating efficiency of at least 7.5 Heating System Performance Factor and a cooling Seasonal Energy Efficiency Ration (SEER) efficiency of at least 13.5;
- central air conditioners with a cooling SEER efficiency of at least 13.5; and
- advanced natural gas water heaters with an Energy Factor of at least 0.65.

Other than central air units and heat pumps, the items eligible for the sales tax exemption under the bill are leading edge technology that could take a few years to get on the market and therefore should result in little revenue loss due to consumers taking advantage of the exemption during the first few years. The bill could increase demand for the central air units and heat pumps that are eligible for the exemption. The extent of any such increase, however, cannot be estimated.

Motor Vehicle Excise Tax Credit

Light vehicles: Electric vehicles, including vehicles powered by fuel cells, would be eligible for a credit against the 5% vehicle excise tax not to exceed $2,000. The credit may not be claimed: (1) for a vehicle unless the vehicle is registered in the State; and (2) for a qualified electric vehicle unless the owner has already met any State or federal laws or regulations governing clean-fuel vehicle or electric vehicle purchases applicable during the calendar year in which the vehicle is titled. The credit does not apply to any vehicle titled on or after July 1, 2004.

Qualified hybrid vehicles (combining fossil fuel, electric storage, and regenerative braking) would qualify for credits on a sliding scale, ranging from $250 for each vehicle that has a rechargeable energy storage of between 5% and 10% of the maximum available power, to $1,000 for each vehicle that has a rechargeable energy storage of 30% of the maximum available power. If the qualified hybrid vehicle employs a regenerative braking system that supplies to the rechargeable energy storage system, at least 20% of the energy available from braking, the credit allowed shall be increased by:

- $125 if the regenerative braking system supplies to the rechargeable energy storage system between 20% and 40% of the energy available from braking;
- $250 if the regenerative braking system supplies to the rechargeable energy storage system between 40% and 60% of the energy available from braking; and
- $500 if the regenerative braking system supplies to the rechargeable energy storage system at least 60% of the energy available from braking.

A qualifying hybrid vehicle would have to meet the current vehicle exhaust standard set under the national low-emission vehicle program for gasoline-powered passenger cars.

According to PRI, Honda has one hybrid vehicle scheduled to go on the market this year with an expected cost of approximately $20,000. Toyota is expected to introduce a hybrid vehicle in July 2000, and Ford plans to introduce a gas/electric hybrid sometime in 2003. It is estimated that only a few hundred vehicles will be sold in Maryland during the bill's effective period. If 200 vehicles are sold annually, at a cost of $20,000, the annual reduction to sales and use tax revenue would be approximately $200,000. This is because the TTF is held harmless from the change in motor vehicle excise taxes by the Comptroller distributing, from the sales and use revenue, to the TTF the amount of the credit.

In addition, both Honda and General Motors have indicated that they will discontinue production of their electric vehicles.

As stated above, the State currently offers a tax credit for the purchase of a qualified clean-fuel vehicle. The credit is scheduled to sunset June 30, 2000. The Bureau of Revenue Estimates (BRE) advises that very few taxpayers have claimed the existing State credit.

Income Tax Credits

Solar systems: The purchase of new solar photovoltaic systems would qualify for a credit against the State income tax of up to a maximum of $2,000. Similarly, the purchase of new solar water heating systems would qualify for a credit of up to a maximum of $1,000. The credit may not be claimed for property placed into service before July 1, 2000, or after December 31, 2004.

According to PRI, costs for this type of equipment are approximately $7,000 per kilowatt hour of capacity. A full size home would require three to four units, but units are typically sold to supplement (one or two Kw) existing energy sources. North Carolina has a similar credit and between 100 and 200 units are sold per year. Assuming 200 units are sold in Maryland each year, and the average credit claimed was $1,500, the total cost would be $300,000 per year.

Qualified Energy Resources

Wind power, poultry litter, and closed-loop biomass-based power systems would qualify the owner, operator, or lessee for a tax credit against the State income tax for electric power produced and delivered to an unrelated third party.

Wind power: Electric power generated in Maryland by newly installed wind turbines would be eligible for a 0.85-cent-per-kilowatt-hour tax credit, approximately one-half of the current federal tax credit.

Biomass power: Electric power generated in Maryland by newly installed facilities fueled exclusively by biomass (organic plant material) would be eligible for a 0.85-cent-per-kilowatt-hour tax credit, approximately one-half of the current federal tax credit. Where electricity is produced from biomass that is co-fired at coal-burning power plants, a credit of 0.5 cent-per-kilowatt hour would be authorized. Qualified energy resources include: (1) any solid, nonhazardous, cellulosic waste material (segregated from other waste materials), such as those derived from forest-related resources, not including old growth timber: mill residues, pre-commercial thinnings, slash or brush; (2) waste pallets, crates, dunnage, and landscape or right-of-way trimmings, not including unsegregated municipal waste and post-consumer wastepaper; and (3) agricultural sources including orchard crops and, vineyard, grain, legumes, sugar, and other crop by-products or residues.

Qualified energy resources also includes methane gas resulting from the anaerobic decomposition or organic materials in landfills or wastewater treatment plants.

Qualifying facilities must be placed into service on or after January 1, 2001, but before January 1, 2005, except in the case of facilities that produce electricity from a qualified energy resource that is co-fired with coal at the facility and initially begins co-firing a qualified energy resource on or after January 1, 2001 but before January 1, 2005, regardless of when the original facility was placed into service.

The credit may be carried forward for up to ten years.

According to PRI, there is significant potential for the production of energy using qualified energy resources. As yet, no facilities of these types are currently operational in Maryland, so it is expected that no credits will be claimed until at least fiscal 2003.

The actual impact of the tax incentives provided by the bill will depend on the number of taxpayers claiming the proposed credits and exemptions. The Energy Star appliances are the most readily available to the average consumer. As a result, it is estimated that the sales and use tax exemption for appliances could reduce general fund revenues from $1 to $2 million per year. Since some of the other technology referred to either does not exist yet or is not yet available in Maryland, it is difficult to accurately determine the impact of the tax incentives associated with them. Future year losses could be larger to the extent that more taxpayers take advantage of the tax incentives provided by the bill.

Credits taken on personal income tax returns result in a reduction of general fund revenues. 75% of the credits taken on corporate income tax returns result in a general fund reduction and the remaining 25% result in a reduction in TTF revenues because of the distribution of corporate income tax revenue to the TTF. At this time, the number of credits expected to be claimed on personal or corporate income tax returns cannot be reliably estimated.

The Maryland Energy Administration advises that expenditures would increase by $10,000 in fiscal 2001 to promulgate regulations and to develop voluntary labeling and public information materials to identify products eligible for the tax incentives provided for by the bill.

The Comptroller's Office reports that a separate schedule may be needed to assist taxpayers in learning about the new credits proposed by the bill. The associated cost of printing a new form would be approximately $1,300 in fiscal 2001 and $1,000 annually thereafter. The Department of Legislative Services advises that since new forms are printed every year, the costs could be absorbed with existing budgeted resources.

Local Fiscal Effect: Local government revenues would decline as a result of corporate returns claiming the credits proposed in the bill. As mentioned above, 75% of corporate tax revenues are distributed to the general fund, and 25% are distributed to the TTF. Of the 25% distributed to the TTF, approximately 30% is distributed to local jurisdictions.

Additional Comments: As stated above, this bill is loosely patterned after proposed federal legislation. According to the American Council for an Energy Efficient Economy, the United States Department of the Treasury and the Energy Information Administration estimates the federal bill would cost approximately $3.6 billion over five years. It is estimated that the cost of the bill for Maryland, based on Maryland's share of the population (approximately 2.5%), would be approximately $36.25 million over five years, or $7.25 million annually.

Additional Information

Prior Introductions: None.

Cross File: None.

Information Source(s): Comptroller of the Treasury (Bureau of Revenue Estimates); Maryland Energy Administration; Potomac Resources, Inc.; Natural Resources Defense Council; Department of Legislative Services

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