

Department of Legislative Services  
 Maryland General Assembly  
 2004 Session

FISCAL AND POLICY NOTE

House Bill 1194 (Delegate Walkup, *et al.*)  
 Ways and Means

Income Tax Credit - Wind Energy, Photovoltaic, and Solar Water Heating Systems

This bill allows an individual or a corporation to claim a credit against the State income tax for 15% of the total installed costs of “wind energy systems” placed in service during the taxable year. The amount of the credit may not exceed \$2,000 for each system. The amount of the credit may not exceed the State income tax due and any unused amount may not be carried forward to another taxable year.

The bill also repeals the December 31, 2004 sunset provision of the credit allowed for the costs of specified photovoltaic and solar water heating systems.

The bill takes effect July 1, 2004 and applies to tax year 2004 and thereafter.

Fiscal Summary

**State Effect:** General revenue decrease of \$207,000 in FY 2006 due to the extension of the solar tax credit, increasing by 30% annually thereafter. Potentially significant general fund and Transportation Trust Fund (TTF) revenue decrease beginning in FY 2006 as a result of the wind energy tax credit. Revenues could decline by up to \$2,000 for each taxpayer who installs a wind energy system and claims the credit. The total decrease cannot be reliably estimated.

(in dollars)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
GF Revenue	\$0	(\$207,000)	(\$261,100)	(\$349,900)	(\$454,800)
GF/SF Rev.	(-)	(-)	(-)	(-)	(-)
Expenditure	\$0	\$0	\$0	\$0	\$0
Net Effect	\$0	(\$207,000)	(\$261,100)	(\$349,900)	(\$454,800)

Note:() = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate effect

**Local Effect:** Local government revenues would decline as a result of corporate taxpayers claiming the wind energy credit proposed by the bill. Seventy-six percent of corporate tax revenues are distributed to the general fund, and 24% is distributed to the TTF. Of the 24% distributed to the TTF, approximately 30% is distributed to local jurisdictions.

**Small Business Effect:** Minimal.

---

## Analysis

**Bill Summary:** Wind energy system is defined as equipment that uses wind energy to generate mechanical power or electricity. This includes wind turbines, towers, wiring, controllers, inverters, and batteries.

The credit allowed under current law for the capitalized costs paid or incurred for the installation of a wind turbine that is a qualifying alternate energy source and is installed to serve a green whole building, green base building, or green tenant space, may not be claimed for the installation of wind turbines if the credit is taken under the bill, with respect to wind turbines.

**Current Law:** An owner or tenant may claim a credit in the amount of 25% of the sum of the capitalized costs paid or incurred for the installation of a wind turbine that is a qualifying alternate energy source and is installed to serve a green whole building, green base building, or green tenant space. The amount of the credit may be claimed for each wind turbine installed, including the cost of the foundation or platform and the labor costs associated with installation.

The amount of the solar energy tax credit is equal to 15% of the installation cost of qualifying photovoltaic and solar water heating property. The maximum amount of credit may not exceed: (1) \$2,000 for photovoltaic property; (2) \$1,000 for solar water heating property; or (3) the tax liability for that tax year. Any unused amount of the credit may not be carried forward to any other tax year.

Photovoltaic property is defined as solar energy property that uses a solar process to generate electricity and meets applicable Maryland Energy Administration performance and quality standards. Solar energy property includes property that uses solar energy to generate electricity, heat or cool a structure or provide hot water, or provides solar process heat. Swimming pools, hot tubs, or other energy storage medium that has a function other than energy storage does not qualify as solar energy property.

Solar water heating property is defined as property that uses solar energy to provide hot water for use within the structure it is installed and meets applicable Maryland Energy Administration performance and quality standards.

The tax credit may not be claimed for property placed in service after December 31, 2004, and may only be applied to tax years beginning in 2000 and ending in 2004.

**Background:** The table below lists the estimated energy consumption, in trillion BTUs, for Maryland in 2000 by energy source.

---

<u>Coal</u>	<u>Natural Gas</u>	<u>Petroleum</u>	<u>Nuclear</u>	<u>Hydroelectric</u>	<u>Wood</u>	<u>Geothermal, Wind, Photovoltaic</u>
312.1	217.1	553.4	144.2	17.7	35.8	0.2

Source: U.S. Department of Energy

---

**Exhibit 2** lists the amount of solar tax credits that have been claimed under the tax credit program since its inception in tax year 2000. The Comptroller's Office reports that almost all of the credits were claimed for solar energy property and all of the returns were filed against the personal income tax.

---

**Exhibit 2**  
**Solar Tax Credit Claimed by Tax Year**

<u>Tax Year</u>	<u>Returns</u>	<u>Credits</u>
2000	6	\$3,845
2001	16	16,467
2002	106	<u>94,230</u>
<b>Total</b>	<b>128</b>	<b>\$114,542</b>

---

## **State Fiscal Effect:**

### *Extension of Solar Tax Credit*

Under current law, the last year solar tax credits can be earned is in tax year 2004. This bill extends the tax credit program to apply beginning in tax year 2005. General fund revenues will decline by approximately \$207,000 beginning in fiscal 2006 and increasing by approximately 30% annually. This estimate is based on the following facts and assumptions.

- \$94,230 in credits were claimed in tax year 2002; and
- according to the Department of Energy, domestic shipments of photovoltaic cells and modules increased by approximately 30% annually from 1993 to 2000.

Legislative Services advises that it is difficult to predict the future amount of credits claimed due to the limited history of the existing tax credit and relatively large potential increase in utilization due to further technological advances that increase the cost attractiveness of solar energy systems relative to conventional energy sources.

### *Wind Energy Tax Credit*

The actual cost of the wind energy credit cannot be reliably estimated and depends on the number of taxpayers who install wind energy systems, the cost of each system, and the taxpayer's income tax liability.

According to the American Wind Energy Association the cost of installing a household sized wind turbine can be between \$6,000 and \$22,000, depending on the size of the unit, manufacturer, and service agreement. With a mean cost per unit of \$14,000, it is assumed that all taxpayers would be able to claim the maximum \$2,000 credit proposed by the bill. Therefore, State revenues would decline by \$2,000 for every taxpayer who installs a wind energy system and claims the credit.

According to the Public Service Commission, approval has been granted for a company to build up to 70 wind turbines in Western Maryland. Due to changes in federal tax incentives, there is uncertainty, however, if the project is moving forward. Revenues could decrease by up \$140,000 as a result of the project.

The Maryland Energy Administration advises that there is a possibility of numerous other wind turbines being installed in Maryland, particularly in the Eastern Shore, that would qualify for the tax credit proposed by this bill.

**State Expenditures:** The Comptroller's Office would incur a one-time expenditure of \$50,000 in fiscal 2005 to add the credit to the income tax return forms 500CR and 502CR. However, the cost of adding the credit would be offset to some degree because the credit for photovoltaic and solar water heating systems would not need to be removed from the income tax form in fiscal 2007. The Department of Legislative Services advises that since forms and instructions are updated annually, the cost of these changes could be absorbed within existing resources.

---

### **Additional Information**

**Prior Introductions:** HB 917 of 2003, an identical bill, was not reported from the House Ways and Means Committee. HB 1110 of 2002, a similar bill, received an unfavorable report from the House Ways and Means Committee.

**Cross File:** None.

**Information Source(s):** American Wind Energy Association, Comptroller's Office, Maryland Energy Administration, Public Service Commission, Department of Legislative Services

**Fiscal Note History:** First Reader - March 17, 2004  
ncs/mdr

---

Analysis by: Robert J. Rehrmann

Direct Inquiries to:  
(410) 946-5510  
(301) 970-5510