BILL # HB 2843 **TITLE:** energy efficient products

SPONSOR: Mason **STATUS:** House Engrossed

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FISCAL ANALYSIS

Description

The bill creates a non-refundable individual income tax credit for purchases of energy efficient products. For tax years 2006 and 2007, consumers may claim: a $150 credit for purchasing a qualifying central air conditioner or air-source heat pump; a $100 credit for a qualifying clothes washing machine; and a $25 credit for a qualifying ceiling fan.

Estimated Impact

The fiscal impact of the bill is estimated to be approximately $(33) million in FY 2007 and in FY 2008. These estimates are based on projected growth in households using these devices, replacement purchases by existing households, and the estimated market shares for products that qualify for the tax credits. These estimates do not include a possible increase in appliance purchases due to the availability of a federal income tax credit and the limited time availability of the credits, which may accelerate consumers' replacement purchases.

The Southwest Energy Efficiency Project estimated the bill would result in a revenue loss of $(5) million during the 2 years the credits would be available, but it did not provide an analysis of how this estimate was derived. The Department of Revenue did not provide an estimate of the bill's fiscal impact.

Analysis

The Energy Star program is sponsored by the U.S. Environmental Protection Agency and the U.S. Department of Energy to promote the use of energy efficient products. Energy Star establishes efficiency standards for a variety of products and authorizes equipment manufacturers to use the Energy Star label on products meeting these standards.

The federal Energy Policy Act of 2005 provides federal income tax credits in tax years 2006 and 2007 to promote purchases of energy efficient products. The new law provides a $300 credit to consumers purchasing air-source heat pumps or central air conditioning units that meet specific efficiency standards. It also provides a credit of $100 per unit to manufacturers that produce and sell clothes washers meeting Energy Star standards.

HB 2843 provides non-refundable individual income tax credits to consumers for purchases of clothes washers and ceiling fans that meet Energy Star standards and for residential air conditioning units and heat pumps meeting the standards set by federal law. In order to estimate the potential income tax credits generated by the bill, it is necessary to project: 1) the number of units sold to equip new homes; 2) the number of units sold to replace existing units; and, 3) the proportion of equipment sold that will meet the federal energy efficiency standards.

The following analysis is based on actual and projected home construction and purchases of energy efficient products. The federal tax incentives that will be in effect through 2007 are likely to encourage manufacturing and purchasing of qualifying equipment. Combined with the state tax credits provided by the bill and the limited, 2-year period they would be in effect, these incentives may cause consumers to accelerate purchases of energy efficient products. The behavioral impact of these incentives cannot be predicted with certainty and have not been factored into this analysis.

HB 2843 Fiscal Impact Summary – FY 2007 ($ in Millions)						
	New		Replacement		Total	
	Number of Credits	Fiscal Impact	Number of Credits	Fiscal Impact	Number of Credits	Fiscal Impact
Central Air Conditioning/ Heat Pumps	60,000	$ (9.0)	76,227	$(11.4)	136,227	$(20.4)
Clothes Dryers	23,280	(2.3)	31,018	(3.1)	54,298	(5.4)
Ceiling Fans	60,000	(1.5)	240,000	(6.0)	300,000	(7.5)
Total	**143,280**	**$(12.8)**	**347,245**	**$(20.5)**	**490,525**	**$(33.3)**

Central Air Conditioners and Heat Pumps

According to data derived from electric utility industry customer surveys, approximately 96% of new homes and 89% of existing homes in Arizona had either central air conditioning units or air-source heat pumps in 2005. Based on the *Arizona Blue Chip Economic Forecast* consensus, approximately 80,000 new homes are projected to be built statewide in 2006, followed by another 75,000 in 2007.

The market share in Arizona for air-cooling equipment that meets the federal efficiency standards is not known. However, it is very likely that the federal tax credits and the lower operating costs for the qualifying units will yield a high percentage of equipment purchases meeting the standards. Electric utility market surveys in California indicated that more than 75% of air conditioners sold in 2003 and 2004 met the federal efficiency standards.

Using the *Arizona Blue Chip* new home construction forecasts and an assumed energy efficient market share of 75%, in 2006 the bill would result in 60,000 credits claimed, which at $150 each would total $9 million. In 2007, an estimated 56,250 claims would generate $8.4 million in state tax credits.

According to U.S. Census Bureau estimates, there were approximately 1.7 million housing units in Arizona in 1991 and 1.74 million units in 1992. Approximately 90% of them had heat pumps or central air conditioning systems. The Air-Cooling and Refrigeration Institute estimates that the average life of central air conditioning units and heat pumps is 15 years. Assuming a 15 year average life, approximately 101,600 units will be replaced statewide in 2006 and 104,200 in 2007. With the energy efficient market share assumed to be 75%, approximately $11.4 million in state tax credits will be generated in 2006 followed by $11.7 million in 2007.

To determine the bill's fiscal impact, it is assumed that the impact of credits claimed for tax year 2006 will be fully realized in FY 2007 and credits claimed for tax year 2007 will be fully realized in FY 2008. Combined, the new home and replacement markets for energy efficient air conditioning units and heat pumps are projected to produce a state revenue loss of $(20.4) million in FY 2007 and $(20.1) million in FY 2008.

Clothes Washers

The electric utility industry customer surveys estimated that 94% of the residences in Arizona had clothes washers in 2005. Estimates of market share by state for Energy Star machines vary widely and have been increasing over time. According to Energy Star, sales of Energy Star washers increased steadily in Arizona from 9.1% of all washers in 2000 to 29.1% in 2004.

Using the Arizona Blue Chip new home construction forecasts and assuming that 94% of the housing units will include clothes washers, approximately 75,200 washers will be sold in 2006, followed by 70,500 in 2007. If 29.1% of the clothes washers purchased are Energy Star qualified, the potential number of credits claimed would be 23,280 and 21,825 in 2006 and 2007, respectively. This would result in potential state revenue losses of $(2.3) million in 2007 and $(2.1) million in FY 2008, assuming that the credits claimed in each tax year would produce a fiscal impact in the subsequent fiscal year.

The Department of Energy and the appliance industry estimate the average life of a clothes washer to be in the range of 14 to 15 years. Using Census data and the electric industry survey estimates, approximately 106,600 washers will be replaced in 2006 and 109,300 in 2007, with at least 31,000 and 31,800 of them, respectively, meeting Energy Star standards. This would generate a fiscal impact of $(3.1) million in FY 2007 and $(3.2) million in FY 2008. Combined, the new home and

replacement markets for Energy Star clothes washers are estimated to produce a state revenue impact of $(5.4) million in FY 2007 and $(5.3) million in FY 2008.

Ceiling Fans

While the Energy Star program includes efficiency standards for ceiling fans, it does not provide statistics for Energy Star's share of total sales. Industry and federal government estimates suggest that annual ceiling fan sales have ranged from 15 million units to 20 million units nationally in recent years. Arizona's population-based share of 15 million fans would be approximately 300,000 (2% of the national total). This estimate is probably conservative, given the state's relatively warm climate and rapid pace of new home construction. For this analysis, it is assumed that Arizona's share of the national total is double its population-based share, or 4% of U.S. sales. While the Energy Star market share is not known, if 50% of the units sold were to qualify, the potential number of credits claimed would be 300,000 in 2006 and 2007, with a state fiscal impact of $(7.5) million in FY 2007 and in FY 2008. Of these, 60,000 would be installed in new homes (assuming 75% with fans installed, 2 fans per unit, and a 50% Energy Star market share), while the remaining 240,000 fans would be installed in existing residences.

Local Government Impact

Each year cities and towns receive an amount equal to 15% of income tax collections from two years prior. This bill would reduce local government distributions by $(5) million in FY 2009 and in FY 2010.

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