Senate Fiscal Agency
P. O. Box 30036
Lansing, Michigan 48909-7536

SFA BILL ANALYSIS

Telephone: (517) 373-5383
Fax: (517) 373-1986
TDD: (517) 373-0543

Senate Bills 1317, 1320, and 1321 (as introduced 5-9-02)
Sponsor: Senator Valde Garcia (S.B. 1317)
Senator Leon Stille (S.B. 1320)
Senator Alan Sanborn (S.B. 1321)
Committee: Finance

Date Completed: 5-14-02

CONTENT

The bills would exempt from the sales tax, the use tax, and the personal property tax certain alternative energy systems and products. The exemptions would apply to taxes levied after December 31, 2002, and before January 1, 2013.

Senate Bills 1317 and 1321

Senate Bill 1317 would amend the Use Tax Act and Senate Bill 1321 would amend the General Sales Tax Act to exempt from the taxes the storage, use, consumption, or sale of an alternative energy marine propulsion system, alternative energy system, or alternative energy vehicle. The exemptions would apply only if the system or vehicle had not previously been subject to a lease or a sale at retail. Further, battery cell energy systems would not be exempt from the taxes.

Senate Bill 1320

Exemption

The bill would amend the General Property Tax Act to exempt from the personal property tax (if the property were not subject to or exempt from the tax before the bill's effective date) an alternative energy system; an alternative energy vehicle; all personal property of an alternative energy technology business; and the personal property of a business that was not an alternative energy technology business, that was used solely for the purpose of researching, developing, or manufacturing an alternative energy technology.

Alternative Energy System

The bill would define "alternative energy system" as the small-scale generation of power or heat from one or any combination of the following types of energy systems: fuel cell, photovoltaic, solar-thermal, wind, CHP, microturbine, miniturbine, stirling cycle, battery cell, or clean or renewable. "Small-scale" would mean a single energy system with a generating capacity of two megawatts or less, or an integrated energy system with a generating capacity of 10 megawatts or less.

A "full cell energy system" would be one of more fuel cells or fuel cell stacks (an assembly of fuel cells) and an inverter or other power conditioning unit. A "fuel cell" would be an electromechanical device that used an external fuel and continuously converted the chemical energy released from the oxidation of hydrogen or methanol by oxygen directly into electric energy without combustion and consisted of an anode, a cathode, and an electrolyte. A fuel

cell energy system could include a fuel cell processor, that is, a device that converted a fuel, including methanol, natural gas, or gasoline, into a hydrogen rich gas, without combustion for use in a fuel cell.

A "photovoltaic energy system" would be a solar energy device composed of one or more photovoltaic cells or photovoltaic modules (an assembly of photovoltaic cells) and an inverter or other power conditioning unit. A "photovoltaic cell" would be an integrated device consisting of layers of semiconductor materials and electrical contacts capable of converting incident light directly into electricity. A photovoltaic system could include batteries for power storage.

A "clean or renewable fuel energy system" would be a device that was designed and used solely for the purpose of generating power from a clean fuel or renewable fuel. It would not include a conventional gasoline or diesel fuel engine or a retrofitted conventional diesel or gasoline engine. A "renewable fuel" would be "biodiesel" or biodiesel blends containing at least 20% biodiesel. "Biodiesel" would mean a diesel fuel substitute consisting of methyl or ethyl esters produced from the transesterification of animal or vegetable fats with methanol or ethanol. Renewable fuel also would include biomass, which would be residues from the wood and paper products industries, residues from food production and processing, trees and grasses grown specifically to be used as energy crops, and gaseous fuels produced from solid biomass, animal wastes, municipal waste, or landfills. "Clean fuel" would be methane; natural gas; methanol neat or methanol blends containing at least 85% methanol; denatured ethanol neat or ethanol blends containing at least 85% ethanol; compressed natural gas; liquefied natural gas; liquefied petroleum gas; or hydrogen.

A "solar-thermal energy system" would be an integrated unit consisting of a sunlight collection device, a system containing a heat transfer fluid to receive the collected sunlight, and heat exchangers to transfer the solar heat energy to a thermal storage tank to heat or cool spaces or water or to generate electricity. "Wind energy system" would mean an integrated unit consisting of a wind turbine composed of a rotor, an electrical generator, a control system, and a tower, which extracted energy from moving air to produce electricity.

A "CHP energy system" would be an integrated unit that generated power and either cooled, heated, or controlled humidity in buildings or provided heating, drying, or chilling for an industrial process, including and limited to both of the following: 1) an absorption chiller, a desiccant dehumidifier, or heat recovery equipment; and 2) a fuel cell energy system or an internal combustion engine, an external combustion engine, microturbine, or miniturbine fueled solely by a clean or renewable fuel.

A microturbine or miniturbine energy system would be an electric power generating system composed of a compressor, combustor, turbine, and generator, fueled solely by a clean fuel or a renewable fuel with a capacity of not more than 250 kilowatts (for a microturbine) or two megawatts (for a miniturbine). A miniturbine or microturbine energy system could include a recuperator and an alternator.

A "stirling cycle energy system" would be a closed-cycle regenerative heat engine that was fueled solely by a clean fuel or renewable fuel, and that used an external combustion process, heat exchangers, pistons, a regenerator, and a confined working gas, such as hydrogen or helium, to convert heat into mechanical work. A stirling cycle energy system could include a generator to generate electricity.

A "battery cell energy system" would be one or more battery cells and an inverter or other power conditioning unit used to propel a motor vehicle or an "alternative energy marine propulsion system; provide electric power that was distributed within a dwelling or other structure; and/or provide electric power to operate a portable electronic device, including a

laptop computer, a personal digital assistant, or a cell phone. "Battery cell" would mean a closed electrochemical system that converted chemical energy from oxidation and reduction reactions directly into electric energy without combustion and without external fuel, and consisted of an anode, a cathode, and an electrolyte.

An "alternative energy marine propulsion system" would be an onboard propulsion system or detachable outboard propulsion system for a watercraft that was powered by a fuel cell energy system, photovoltaic energy system, or battery cell energy system, and that was the singular propulsion system for the watercraft. It would not include battery powered motors designed to assist in the propulsion of the watercraft during fishing or other recreational use.

Alternative Energy Vehicle

An alternative energy vehicle would be a motor vehicle manufactured by an original equipment manufacturer that met Federal motor vehicle safety standards for its class of vehicles as defined by the Michigan Vehicle Code, and propelled by an alternative energy system. An alternative energy vehicle would not include a vehicle designed to operate solely on gasoline or diesel fuel, regardless of whether it could also be operated on an alternative fuel. An alternative energy vehicle would include the following:

-- An alternative fueled vehicle (a vehicle powered solely by a clean or renewable fuel energy system and fueled solely by a clean or renewable fuel).
-- A fuel cell vehicle (a motor vehicle powered solely by a fuel cell energy system).
-- An electric vehicle (a motor vehicle powered solely by a battery cell energy system).
-- A hybrid vehicle (a motor vehicle that obtained power solely from two different alternative energy systems).
-- A solar vehicle (a motor vehicle powered solely by a photovoltaic energy system).
-- A hybrid electric vehicle (a vehicle powered by an integrated propulsion system consisting of an electric motor and combustion engine). A hybrid electric vehicle would not include a retrofitted conventional diesel or gasoline engine. It would have to obtain the power necessary to propel the vehicle from a combustion engine and a battery cell energy system; a fuel cell energy system; or a photovoltaic energy system.

Alternative Energy Technology Business

An alternative energy technology business would be a business engaged solely in the research, development, or manufacturing of alternative energy technology. "Alternative energy technology" would mean equipment, component parts, materials, electronic devices, testing equipment, and related systems that were solely related to the storage of hydrogen for use in an alternative energy system; the process of generating and putting into a usable form the power or heat generated by an alternative energy system; or a microgrid (the lines, wires, and controls to connect two or more alternative energy systems). Alternative energy technology would not include those component parts of an alternative energy system that were required regardless of the energy source.

Proposed MCL 205.94w (S.B. 1317)
Proposed MCL 205.54aa (S.B. 1321)
Proposed MCL 211.9i (S.B. 1320)

Legislative Analyst: George Towne

FISCAL IMPACT

Senate Bills 1317 and 1321

The preliminary analysis is that these bills would have a very minimal negative fiscal impact, at most, on sales tax collections at the present time, but would potentially have a much larger negative impact in future years.

Senate Bill 1320

The bill would reduce both State and local revenues by an unknown amount. The bill would exempt certain personal property from property taxes, thereby reducing State revenues received under the State education tax to the School Aid Fund. By reducing local property taxes the bill also would increase expenditures from the School Aid Fund. Because the bill would exempt only property not currently subject to taxation, the revenue loss would reflect a loss of future revenues from new property and not a reduction from revenues currently received from existing property.

The potential impact of the bill could be significant. General Motors Corporation, Daimler-Chrysler, and Ford Motor Company all reportedly make significant expenditures, in the range of hundreds of millions of dollars each year, on research and development of the types of property affected by the bill. The total expenditures by all taxpayers for property that would be affected by the bill is unknown. If the expenditures for all affected taxpayers totaled $500 million per year and 50% of that expenditure were on personal property covered by the bill, then the bill would exempt $250 million per year of personal property from the property tax. As a result, in the first year the bill was effective, School Aid Fund revenues would be reduced by $750,000 and local unit revenues would be reduced by approximately $6.8 million. However, over time the impact would accumulate, as new property was added each year. If expenditures followed the same rate of growth, by 2005 the calendar year impact of the bill would reduce School Aid Fund revenues by approximately $2.3 million and local unit revenues by approximately $20.3 million.

The bill would increase expenditures from the School Aid Fund because local units would lose revenues from the 18 mills levied locally for school purposes. As a result, under the example above, the bill also would increase School Aid Fund expenditures by approximately $2.3 million in calendar year 2003 and by $6.8 million by calendar year 2005.

This fiscal impact is preliminary and will be revised as additional information becomes available.

Fiscal Analyst: Jay Wortley
David Zin

S0102\s1317sa