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LC01862
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STATE OF RHODE ISLAND

IN GENERAL ASSEMBLY

JANUARY SESSION, A.D. 2003

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A N A C T

RELATING TO TAXATION

Introduced By: Senators Bates, Blais, Felag, Paiva-Weed, and Sosnowski

Date Introduced: February 26, 2003

Referred To: Senate Finance

It is enacted by the General Assembly as follows:

1 SECTION 1. Section 44-56-1 of the General Laws in Chapter 44-56 entitled "Renewable
2 Energy Sales Tax Credit" is hereby amended to read as follows:

3 **44-56-1. Renewable energy sales tax refund -- Sales tax refund on sales of qualifying**
4 **renewable energy systems.** -- (a) (1) The division of taxation shall refund any tax paid pursuant
5 to the provisions of chapter 18 of this title resulting from the sale of any qualifying renewable
6 energy system.

7 (2) As used in this section, a qualifying renewable energy system shall be either a
8 photovoltaic system, a solar domestic hot water system, solar space heating system, a geothermal
9 system or wind-generating system.

10 (i) For photovoltaic systems, the system shall be able to generate electricity directly from
11 sunlight and be able to have it provide electricity for the home. These systems shall either be
12 "stand alone" systems that use batteries for storage of electricity or "grid interconnected" systems
13 that allow the electric meter to spin backwards during periods where the photovoltaic system is
14 generating more electricity than the load of the house. These systems shall have an electrical
15 permit that has had a final inspection done by the electrical inspector for the city or town of the
16 installation.

17 (ii) For solar domestic hot water systems, the system shall consist of solar collectors,
18 pump, heat exchanger, and storage tank designed to heat water. These systems must have a
19 plumbing permit that has had a final inspection done by the plumbing inspector for the city or

1 town of the installation.

2 (iii) For solar space heating systems, the system shall consist of solar collectors, pump,
3 heat exchanger, storage tank(s), and a method of distributing the heat to areas of the house that
4 need heat. These systems shall have a mechanical permit that has had a final inspection done by
5 the mechanical/plumbing inspector for the city or town of the installation.

6 (iv) For wind energy systems, the system shall produce electricity through the use of
7 wind generators or wind turbines, that can be used directly, as in water pumping applications, or
8 can be stored in batteries for household usage. Wind energy systems can be used alone, or can be
9 used as part of a hybrid system in which their output is combined with photovoltaics, and/or a
10 fossil fuel generator.

11 (v) For geothermal systems, the system shall use conventional vapor compression heat
12 pumps to extract low-grade solar energy from the earth. The system shall be used to heat
13 buildings, cool buildings and/or provide hot water. The system shall include all geothermal
14 energy collectors, pumps, heat exchangers, storage tanks and heat distribution equipment. Such
15 systems shall have a mechanical permit that has had a final inspection done by the
16 mechanical/plumbing inspector for the city or town of the installation.

17 (b) Purchasers of qualifying renewable energy systems shall receive a sales tax refund
18 upon application to the state division of taxation upon submission of:

19 (1) A form prescribed by the tax administrator containing;

20 (i) A list of equipment purchased;

21 (ii) The names and addresses of vendor and purchaser; and

22 (iii) Addresses of the building upon which the equipment has been installed;

23 (2) Copies of appropriate receipts; and

24 (3) A systems certification pursuant to section 44-57-5 to verify that the purchased items
25 were actually used in qualifying systems.

26 (c) For purposes of local municipal property tax assessment, qualifying renewable
27 energy systems shall not be assessed at more than the value of a conventional heating,
28 conventional hot domestic hot water systems, or energy production capacity that otherwise could
29 be necessary to install in the building. Qualifying systems shall include photovoltaic systems
30 (renewable energy systems), solar domestic hot water systems, and active solar space heating
31 systems.

32 SECTION 2. Sections 44-57-2, 44-57-4, 44-57-5 and 44-57-7 of the General Laws in
33 Chapter 44-57 entitled "Residential Renewable Energy System Tax Credit" are hereby amended
34 to read as follows:

1 **44-57-2. Definitions.** – As used in this chapter unless the context otherwise requires:

2 (1) "Active" means a solar renewable energy system that uses mechanical parts to
3 collect, store, and move heat;

4 (2) "Applicant" means a party who files a Rhode Island tax return and applies for a
5 residential alternative energy device tax credit under this section;

6 (3) "Application form" means the form that goes to the state energy office that will
7 determine if systems meet the requirements for this tax credit;

8 (4) "Array" means any number of photovoltaic modules connected together electrically
9 to provide a single electrical output;

10 (5) "BTU" means British thermal unit;

11 (6) "Consumer disclosure" means a form provided by the state energy office describing
12 the renewable energy system. The contractor fills this form out and gives it to the buyer of a
13 renewable energy system. It shows estimated energy savings of the renewable energy system,
14 required conservation items, required maintenance, and freeze protection information and other
15 data required by the state energy office;

16 (7) "Consumer information" means literature that is provided by the state energy office
17 to contractors, solar dealers, and consumers informing them about the tax credit contained in this
18 chapter and general consumer information;

19 (8) "Contractor" means a person or company who sells and/or installs renewable energy
20 systems;

21 (9) "Contractors' certification" means a contractor system certification issued by the state
22 energy office to a contractor for a specific renewable energy system. The system shall allow the
23 contractor to install that device for the tax credit without getting a separate system certification
24 for each job;

25 (10) "Contractors' registration board" means the board established pursuant to the
26 provisions of chapter 65 of title 5 responsible for issuing contractors' registration numbers and
27 cards to contractors who are required by state law to be registered. The board is also responsible
28 for ensuring that all registered contractors abide by the guidelines of the contractors' registration
29 board;

30 (11) "Director" means the director of the Rhode Island state energy office or the
31 director's representative;

32 (12) "Domestic water heating" means the heating of water used in a dwelling for bathing,
33 clothes washing, dishwashing, and other related functions;

34 (13) "Dwelling" means real property inhabited as a principal or secondary residence and

1 located within this state. "Dwelling" includes, but is not limited to, an individual unit within
2 multiple unit residential housing. For purposes of this subdivision:

3 (i) "Principal residence" means the dwelling owned by the applicant who on the date of
4 the application has legal title to a dwelling, including the mortgagor under a duly recorded
5 mortgage of real property, the trustor under a duly recorded deed of trust, or a purchaser under a
6 duly recorded contract for the purchase of real property, and who inhabits the dwelling for no
7 fewer than fourteen (14) days in the calendar year for which the credit is claimed;

8 (ii) "Secondary residence" means vacation property owned by the applicant;

9 (iii) Primary or secondary residences do not include motor homes or recreational
10 vehicles;

11 (14) "Grid interconnect form" means the form required on "grid-connected photovoltaic
12 systems" that is signed by the contractor, the master electrician who makes the grid
13 interconnection, and the homeowner. This form shall be sent to both the participating utility
14 company and the state energy office;

15 (15) "Hybrid" means a renewable energy system that uses some active and passive
16 elements as part of the system;

17 (16) "Installing contractor" means the contractor or subcontractor who actually installs
18 the renewable energy system. This may or may not be the same person or company as the solar
19 dealer;

20 (17) "Inverter" means the device used to convert direct current (DC) to alternating
21 current (AC) in a photovoltaic system;

22 (18) "kWh" means kilowatt-hour; one kWh = 3,413 BTUs;

23 (19) "Module" means the smallest non-divisible self-contained physical structure
24 housing interconnected photovoltaic cells and providing a single DC electrical output;

25 (20) "MM" means million;

26 (21) "Net cost" means what the applicant paid to purchase the renewable energy system.
27 Net cost includes permit and inspection fees. Net costs may include the value of federal tax
28 credits, grants, or utility incentives. Net cost does not include service contracts, rebates,
29 discounts, or refunds;

30 (22) "Owner-built" means a renewable energy system that is assembled and installed on
31 an owner's property and with an owner's labor only;

32 (23) "Passive" means a renewable energy system that relies on heated liquid or air rising
33 to collect, store, and move heat without mechanical devices;

34 (24) "Placed in service" means the date when a renewable energy system is ready and

1 available to produce useable energy;

2 (25) "Solar dealer" means the person or company who signs a contract or proposal with a
3 customer to provide and/or install solar equipment;

4 (26) "Solar domestic hot water system" means a configuration of solar collectors, pump,
5 heat exchanger, and storage tank designed to heat water. System types include forced circulation,
6 integral collector storage, thermosyphon, and self-pumping. For the purpose of determining
7 system yields, a configuration of components is considered a new system if changes occur in any
8 of the following: type or size of collectors; heat exchanger type or effectiveness; size of storage
9 tank; or system type;

10 (27) "State energy office" means the Rhode Island state energy office, also known as the
11 governor's office of energy assistance, within the department of administration;

12 (28) "System certification" means certification that a renewable energy system as
13 described in the application meets criteria for the tax credit;

14 (29) "System approval" means an approval given to renewable energy systems that meet
15 all of the requirements of the state energy office;

16 (30) "Used equipment" means any solar tank or collector which previously has been
17 installed or any piece of equipment not under current manufacturers' warranty;

18 (31) "Verification form" means a form filed with the division of taxation (upon request)
19 by an applicant claiming eligibility for the tax credit. A contractor shall submit a copy of the form
20 to the state energy office;

21 (32) "Watt" means the electrical unit of power or rate of doing work. The rate of energy
22 transfer equivalent to one ampere of electrical current at one-volt potential;

23 (33) "Wh" means watt hours-power consumed by a load over a specified time. As used
24 herein, 1,000 Wh = one kilowatt-hour (kWh);

25 (34) "Wind energy system dealer" means the person or company who signs a contract or
26 proposal with a customer to provide and/or install wind energy equipment;

27 (35) "Wind energy system" means a system that produces electricity through the use of
28 wind generators or wind turbines. The electricity shall be used directly, as in water pumping
29 applications, or shall be stored in batteries for household usage. Wind energy systems shall be
30 used alone, or they shall be used as part of a hybrid system, in which their output is combined
31 with photovoltaics and/or a fossil fuel generator; ~~and~~

32 (36) "Wp" means Watts peak, or the rated maximum power output of a photovoltaic
33 device measured under standard conditions of twenty-eight degrees C (28 degrees C) cell
34 temperature and 1000 W/m² incident sunlight; and

1 (37) “Geothermal system” means a system that produces and stores energy to heat
2 buildings, cool buildings or produces hot water.

3 **44-57-4. Eligible devices.** -- (a) To earn a tax credit pursuant to the provisions of this
4 chapter, the renewable energy system shall be either a photovoltaic system, a solar domestic hot
5 water system, an active solar space heating system, or a wind-generating system:

6 (1) For photovoltaic systems, the system must be able to generate electricity directly
7 from sunlight and be able to have it provide electricity for the home. These systems can either be
8 "stand alone" systems that use batteries for storage of electricity or "grid interconnected" systems
9 that allow the electric meter to spin backwards during periods where the photovoltaic system is
10 generating more electricity than the load of the house. These systems must have an electrical
11 permit that has had a final inspection done by the electrical inspector for the city or town of the
12 installation.

13 (2) For solar domestic hot water systems, the system must consist of solar collectors,
14 pump, heat exchanger, and storage tank designed to heat water. These systems must have a
15 plumbing permit that has had a final inspection done by the plumbing inspector for the city or
16 town of the installation.

17 (3) For solar space heating systems, the system must consist of solar collectors, pump,
18 heat exchanger, storage tank(s), and a method of distributing the heat to areas of the house that
19 need heat. These systems must have a mechanical or plumbing permit and has had a final
20 inspection done by the mechanical/plumbing inspector for the city or town of the installation.

21 (4) For wind energy systems, the energy produced by wind generation can be used
22 directly, as in water pumping applications, or it can be stored in batteries for household usage.
23 Wind generators can be used alone, or they can be used as part of a hybrid system, in which their
24 output is combined with photovoltaics, and/or a fossil fuel generator, and shall:

25 (i) Be a system that is built, installed, and operated in accord with the manufacturer's
26 specifications;

27 (ii) Be a system with manufacturers' warranties against defects in products and materials;

28 (iii) Be a system that complies with general and specific standards set forth in this
29 chapter as they apply to renewable energy systems. These shall include:

30 (A) A photovoltaic system;

31 (B) A solar domestic hot water system;

32 (C) An active solar space heating system; and

33 (D) A wind energy system.

34 (b) The following systems and/or devices shall not be used to qualify for a solar tax

1 credit:

- 2 (1) A passive solar space heating system;
- 3 (2) Passive solar hot water system;
- 4 (3) A sunspace or solar greenhouse;
- 5 (4) Photovoltaic systems installed on boats or recreational vehicles;
- 6 (5) Solar pool collectors;
- 7 (6) Existing renewable energy systems;
- 8 (7) Used equipment;
- 9 (8) Repairs and replacements of existing renewable energy systems; and
- 10 (9) Wind systems installed on boats or installed vehicles.

11 (5) For geothermal systems, the system shall use conventional vapor compression heat
12 pumps to extract low-grade solar energy from the earth. The system shall be used to heat
13 buildings, cool buildings and/or provide hot water. The system shall include all geothermal
14 energy collectors, pumps, heat exchangers, storage tanks and heat distribution equipment. Such
15 systems shall have a mechanical permit that has had a final inspection done by the
16 mechanical/plumbing inspector for the city or town of the installation.

17 **44-57-5. Computation of tax credit.** -- (a) The tax credit on each system as provided for
18 in this chapter shall be determined as follows:

19 (1) Photovoltaic systems:

20 (i) (A) Photovoltaic systems shall have a minimum module size of twenty-four (24)
21 square feet; and

22 (B) Be connected to a battery storage system or be grid interconnected;

23 (ii) Qualifying systems shall receive a tax credit of:

24 (A) Twenty-five percent (25%) of the cost of the system, ~~for systems claimed in year~~
25 ~~2000;~~

26 ~~(B) Twenty percent (20%) of the cost of the system for systems claimed in year 2001;~~

27 ~~(C) Fifteen percent (15%) of the cost of the system for systems claimed in year 2002;~~

28 ~~(D) Ten percent (10%) of the cost of the system for systems claimed in year 2003;~~

29 ~~(E) Five percent (5%) of the cost of the system for systems claimed in year 2004.~~

30 (iii) The maximum cost of the system shall not exceed fifteen thousand dollars
31 (\$15,000). Provided, systems costing more than fifteen thousand dollars (\$15,000) will receive a
32 tax credit based on a fifteen thousand dollar (\$15,000) system cost.

33 (2) Solar domestic hot water systems:

34 (i) (A) Solar domestic hot water systems shall have a minimum collector area of sixty

1 (60) square feet; and

2 (B) A solar storage tank that is at least eighty (80) gallons.

3 (ii) Qualifying systems shall receive a tax credit of:

4 (A) Twenty-five percent (25%) of the cost of the system, ~~for systems claimed in year~~
5 ~~2000;~~

6 ~~(B) Twenty percent (20%) of the cost of the system for systems claimed in year 2001;~~

7 ~~(C) Fifteen percent (15%) of the cost of the system for systems claimed in year 2002;~~

8 ~~(D) Ten percent (10%) of the cost of the system for systems claimed in year 2003;~~

9 ~~(E) Five percent (5%) of the cost of the system for systems claimed in year 2004.~~

10 (iii) The maximum cost of the system shall not exceed seven thousand dollars (\$7,000).

11 Provided, systems costing more than seven thousand dollars (\$7,000) will receive a tax credit
12 based on a seven thousand dollar (\$7,000) system cost.

13 (3) Active solar heating systems:

14 (i) (A) Active solar space heating systems shall have a minimum collector area of one
15 hundred twenty-five (125) square feet; and

16 (B) A system for storing and/or distributing the heat to the living area of the house.

17 (ii) Qualifying systems shall receive a tax credit of:

18 (A) Twenty-five percent (25%) of the cost of the system, ~~for systems claimed in year~~
19 ~~2000;~~

20 ~~(B) Twenty percent (20%) of the cost of the system for systems claimed in year 2001;~~

21 ~~(C) Fifteen percent (15%) of the cost of the system for systems claimed in year 2002;~~

22 ~~(D) Ten percent (10%) of the cost of the system for systems claimed in year 2003;~~

23 (E) Five percent (5%) of the cost of the system for systems claimed in year 2004.

24 (iii) The maximum cost of the system shall not exceed fifteen thousand dollars
25 (\$15,000). Provided, systems costing more than fifteen thousand dollars (\$15,000) will receive a
26 tax credit based on a fifteen thousand dollar (\$15,000) system cost.

27 (4) Wind energy systems:

28 (i) (A) Wind energy systems must have a rotor diameter of at least forty-four inches
29 (44"); and

30 (B) Have a minimum factory rated output of at least two hundred fifty (250) watts at
31 twenty-eight (28) mph.

32 (ii) Qualifying systems shall receive a tax credit of:

33 (A) Twenty-five percent (25%) of the cost of the system, ~~for systems claimed in year~~
34 ~~2000;~~

- 1 ~~(B) Twenty percent (20%) of the cost of the system for systems claimed in year 2001;~~
- 2 ~~(C) Fifteen percent (15%) of the cost of the system for systems claimed in year 2002;~~
- 3 ~~(D) Ten percent (10%) of the cost of the system for systems claimed in year 2003;~~
- 4 ~~(E) Five percent (5%) of the cost of the system for systems claimed in year 2004.~~

5 (iii) The maximum cost of the system shall not exceed fifteen thousand dollars
6 (\$15,000). Provided, systems costing more than fifteen thousand dollars (\$15,000) will receive a
7 tax credit based on a fifteen thousand dollar (\$15,000) system cost.

8 (5) Geothermal systems:

9 (i) Geothermal systems must have either a coefficient of performance of 3.4 or greater or
10 an efficiency ratio of sixteen (16) or greater. All geothermal systems must have a commissioning
11 sign-off by the manufacturer or distributor of the equipment to verify the proper installation and
12 performance of the system. All geothermal systems must meet the following standards:

13 (A) ARI/ASHRAE/ISO-13256-1 for water to air geothermal systems;

14 (B) ARI/ASHRAE/ISO-13256-2 for water to water geothermal systems;

15 (C) ARI/ASHRAE/ISO-13256 GWHP for groundwater heat pumps;

16 (D) ARI/ASHRAE/ISO-13256 GLHP for closed loop heat pumps;

17 (ii) Qualifying systems shall receive a tax credit of:

18 (A) Twenty-five percent (25%) of the cost of the system.

19 (iii) The maximum cost of the system shall not exceed seven thousand dollars (\$7,000).

20 Provided, systems costing more than seven thousand dollars (\$7,000) will receive a tax credit
21 based on a seven thousand dollar (\$7,000) system cost.

22 (5) Wind energy systems:

23 (i) Wind energy systems must have a rotor diameter of at least forty-four inches (44”);

24 and

25 (ii) Have a minimum factory rated output of at least two hundred fifty (250) watts at
26 twenty-eight (28) mph.

27 (iii) Qualifying systems shall receive a tax credit of:

28 (A) Twenty-five percent (25%) of the cost of the system.

29 (b) For purposes of the tax credit, the cost of the renewable energy system shall be the
30 net cost of acquiring the system, and shall not include:

31 (1) Unpaid labor including the applicant's labor;

32 (2) Operating and maintenance costs;

33 (3) Land costs;

34 (4) Legal and court costs;

- 1 (5) Patent search fees;
- 2 (6) Fees for variances;
- 3 (7) Loan interest;
- 4 (8) Service contracts;
- 5 (9) Cost of moving a used renewable energy system from one site to another;
- 6 (10) Cost of repair or resale of a system;
- 7 (11) Any part of the purchase price that is optional, such as an extended warranty or an
- 8 upgraded monitoring system; and
- 9 (12) Delivery fees.

10 **44-57-7. Forms of application for system certification.** -- Application forms for the
11 renewable energy system certification for the respective systems shall contain the following:

12 (1) Photovoltaic systems. - Renewable energy credit application form for photovoltaic
13 systems shall include:

14 (i) A proof of purchase, which can be the contract or invoices, dated in the year for
15 which the applicant is claiming the credit;

16 (ii) A copy of the signed electrical permit and a completed grid interconnect application
17 form;

18 (iii) The cost of the renewable energy system;

19 (iv) The brand name of the module;

20 (v) The module(s) area;

21 (vi) A description of the storage provided if storage is a part of the system;

22 (vii) Storage brand and model;

23 (viii) Storage capacity;

24 (ix) The brand name of the inverter if an inverter is part of the system;

25 (x) The capacity of the inverter;

26 (xi) Orientation and tilt of the device;

27 (xii) The name, address, and phone number of the solar dealer; and

28 (xiii) The name, addresses, and phone number of the installing contractor including any
29 required licenses.

30 (2) Solar domestic hot water systems. - Renewable energy system certification
31 application form for solar domestic hot water systems shall include:

32 (i) A proof of purchase which can be the contract or invoices dated in the year for which
33 the applicant is claiming the credit;

34 (ii) The number of collectors;

- 1 (iii) The manufacturer and/or supplier;
- 2 (iv) The collector dimensions and/or the net area of the collectors;
- 3 (v) The amount of heat storage;
- 4 (vi) The system type;
- 5 (vii) A description of the freeze protection of the system;
- 6 (viii) A description of the overheat protection for the system;
- 7 (ix) The system model;
- 8 (x) The orientation and tilt of the device;
- 9 (xi) A consumer disclosure signed by the applicant and the contractor or supplier, if any;
- 10 (xii) A statement that the purchaser has received a copy of consumer information
11 supplied by the state energy office of Rhode Island.
- 12 (3) Solar space heating systems. - Renewable energy system certification application
13 form for solar space heating systems shall include :
- 14 (i) All of the data required for solar domestic hot water systems above;
- 15 (ii) A description of the heat distribution system;
- 16 (iii) A heat loss estimate for the house;
- 17 (iv) An estimate for the solar contribution of the heating load.
- 18 (4) Wind energy systems. - Renewable energy tax credit application form for wind
19 energy systems shall include:
- 20 (i) A proof of purchase, which can be the contract or invoices, dated in the year for
21 which the applicant is claiming the credit;
- 22 (ii) A copy of the signed electrical permit and a completed grid interconnect application
23 form if applicable;
- 24 (iii) The cost of the renewable energy system;
- 25 (iv) The brand name of the wind generator or wind turbine;
- 26 (v) The rotor diameter of the wind generator or wind turbine;
- 27 (vi) The voltage of the wind generator or wind turbine;
- 28 (vii) The output of the wind generator or wind turbine;
- 29 (viii) A drawing or description of the mounting system;
- 30 (ix) A description of the storage provided if storage is a part of the system;
- 31 (x) Storage brand and model;
- 32 (xi) Storage capacity;
- 33 (xii) The brand name of the inverter if part of the system;
- 34 (xiii) The capacity of the inverter;

1 (xiv) Site plan showing the existing buildings on the property, the location of the wind
2 generator or wind turbine, the height of the tower if applicable including the set-back from all
3 property lines, and the distance to the batteries and/or inverter. On systems using a tower, show
4 all objects (trees, buildings, etc.) that are under thirty (30) feet below anything within five
5 hundred (500) feet. Show the prevailing wind direction on the site plan;

6 (xv) The name, address, and phone number of the wind energy system dealer; and

7 (xvi) The name, addresses, and phone number of the installing contractor including any
8 required licenses.

9 (4) Geothermal systems. – Renewable energy system certification forms for geothermal
10 systems shall include:

11 (i) The proof of purchase which can be the contract or invoices dated in the year for the
12 applicant is claiming the credit;

13 (ii) The amount of heat storage, if any;

14 (iii) The system type;

15 (iv) The system mode;

16 (v) Site plan for any work done outside of the building;

17 (vi) The identity of the manufacturer and supplier;

18 (vii) The name, address and telephone number of the geothermal energy system dealer;

19 (viii) The name, address and telephone number of the geothermal energy system installer;

20 (ix) A copy of the signed electrical permit;

21 (x) A consumer disclosure signed by the applicant and the contractor or supplier; if any;

22 (xi) A statement that the purchaser has received a copy of consumer information supplied
23 by the state energy office.

24 SECTION 3. This act shall take effect on March 1, 2003.

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EXPLANATION
BY THE LEGISLATIVE COUNCIL
OF
A N A C T
RELATING TO TAXATION

1 This act would provide a tax credit/refund to purchasers of certain types of renewable
2 energy systems, including solar, wind, and photovoltaic energy systems. This act would proscribe
3 the type of systems which would qualify a person for the tax credit and the licensing required to
4 be an installer of such systems.

5 This act would take effect on March 1, 2003.

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