

## APPENDICES

The material contained in the appendices is for clarification purposes only; it is not a part of the rule and will not be enforced as a part of the rule. The material is numbered to correspond to the number of the rule as it appears in the text of the code.

## APPENDIX A

## A-18.20 GENERAL ELIGIBILITY CRITERIA.

## ELIGIBILITY

The following information is based upon chapter 313, laws of 1977, and is included to provide information regarding the eligibility and tax benefit criteria necessary for individuals, businesses or corporations applying for tax credit.

(1) *Period of application.* Only those expenses for the alternative energy system that were incurred on or after April 20, 1977 and before January 1, 1985 are eligible for tax benefits.

(2) *Costs.* The cost eligible for tax benefit is defined as follows:

(a) *Businesses and corporations.* The total cost of an alternative energy system, including the design, construction, installation and equipment of the system, for corporations, joint stock companies or associations.

(b) *Individuals.* The cost of an alternative energy system, including the design, construction, installation and equipment of the system, for an individual. The expenses must exceed \$500 in a single year but cannot exceed \$10,000 per system. If the total cost of the alternative energy system exceeds \$10,000, only \$10,000 is eligible.

(3) *Claims.* An alternative energy system may be certified for tax benefits only once. Once an owner has received tax benefits for an alternative energy system, all subsequent owners may not claim benefits for the same system. An owner may apply for certification of more than one alternative energy system provided that each system performs a different function or is installed at a different site and no cost is claimed twice. Additions to existing alternative energy systems are eligible for certification as long as no cost from the existing alternative energy system is claimed twice.

(4) *Labor.* All labor costs for the design, construction and installation of the alternative energy system are eligible to be included in the total cost of that system. The design costs directly attributable to passive solar energy systems are eligible costs provided they are identified and itemized. The department of revenue has stated that the cost of any labor or time of an individual applicant is not eligible, regardless of whether that time or labor was used to design, construct or install the alternative energy system.

## TAX BENEFITS

(1) *Businesses and corporations.* The total eligible cost of the installed alternative energy system for businesses and corporations may

be deducted in the year paid, may be depreciated over the system's design life, or may be amortized over a period of 5 years. The election, once made, may not be changed.

(2) *Individuals.* An individual may credit against state income taxes due, a percentage of the eligible cost of the installed alternative energy system. The percentage of costs for alternative energy systems installed on new or existing buildings, as determined by appearance on the local tax roll, is specified in Table 18.21. The alternative energy system must be installed on property owned by the applicant and the applicant must document percentage of cost used.

TABLE 18.21

Real Property Improvements Appearing on the Local Tax Rolls	Costs Incurred During			
	1977-1978	1979-1980	1981-1982	1983-1984
Prior to April 20, 1977 (Existing buildings)	30%	24%	18%	12%
On or after April 20, 1977 (New construction)	20%	16%	12%	8%

## APPENDIX B

**A-18.21 Equipment and system eligibility.** The following is a partial list of devices, equipment, systems and applications which will, generally, not qualify for income tax benefits:

- (1) *Passive thermal solar energy systems*
  - (a) Structural elements which provide shade, such as awnings, eaves and wing walls;
  - (b) Trees and shrubbery;
  - (c) Thermal mass not within the insulated envelope of the building;
  - (d) Thermal mass not illuminated by sunlight;
  - (e) Glazing without thermal mass or insulation and not part of a total passive solar system;
  - (f) Greenhouses not connected to a building that requires space heating;
  - (g) Curtains or drapes;
  - (h) Dark paint on exterior surfaces or conventional interior surfaces not used as thermal mass;
  - (i) Swimming pools;
  - (j) Building insulation not part of a total passive solar system.
- (2) *Active thermal solar energy systems*
  - (a) Heat pumps;
  - (b) Humidifiers;

- (c) Evaporative coolers;
- (d) Any furnace, heater or fireplace that relies on a conventional fuel as defined in section Ind 18.10 (5);
- (e) Pool filtration or cleaning equipment;
- (f) Water softener units.
- (3) *Wind energy systems*
  - (a) Sailboats, iceboats or other wind-powered vehicles.
- (4) *Waste conversion energy system*
  - (a) Wood-burning stoves, furnaces or fireplaces for residential applications;
  - (b) Small scale (home) trash compactors;
  - (c) Waste transportation equipment (fork-lifts, dump trucks and similar vehicles)
- (5) *Energy conservation equipment*

### APPENDIX C

**A-18.30 (1) Energy savings information.** The following equation may be utilized to demonstrate compliance with this subsection:

(FS) x (IDF) must be greater than (A + B) where,

FS = Annual fuel savings from the alternate energy system.  
(The calculation used to determine the annual fuel savings must be submitted. See Ind 18.30 (1) Note 2.)

IDF = Inflation-discount factor =  $\frac{1}{D - I} \left[ 1 - \left( \frac{1 + I}{1 + D} \right)^N \right]$  where

D = Discount rate

I = Fuel inflation rate

N = Design life of the system

A = Total cost of the design, construction, installation and equipment of the alternative energy system (minus the state tax benefits and the allowed federal tax benefits if applicable). (Copies of all invoices and receipts must be submitted.)

B = Present cost of any estimated minor replacement costs of the alternative energy system. (Calculations of these costs must be submitted.)

This equation determines if the saved fuel costs over the design life of the alternative energy system exceeds the total present cost of that system, with any minor replacement costs, minus the state tax benefits and the federal tax benefits if applicable.

The following example uses this formula to determine if an alternative energy system is eligible for the tax benefit:

Information and data:

- (1) Existing residence with electrical resistance heating;
- (2) Solar energy system for space and water heating which was installed in November 1978;
- (3) Solar system cost (total) = \$10,000;
- (4) System is eligible for the 30% state tax benefit of the \$10,000 total system cost which is \$3,000 (see Appendix A, Table 18.21);
- (5) System is eligible for the maximum federal tax benefit of \$2,200\*;
- (6) Design life of the system = 25 years;
- (7) Minor replacement cost (for heat exchanger fluid) over the 25-year design life = \$200 total;
- (8) Estimated fuel savings from the solar system = \$150 per year.

The equation is:

(FS) x (IDF) must be greater than (A + B)

$$FS = \$150$$

$$IDF = \frac{1}{D - I} \left[ 1 - \left( \frac{1 + I}{1 + D} \right)^N \right]$$

$$D = 7\% \text{ or } .07 \text{ (from Table 18.30)}$$

$$I = 12\% \text{ or } .12 \text{ (from Table 18.30)}$$

$$N = 25 \text{ years}$$

$$IDF = \frac{1}{.07 - .12} \left[ 1 - \left( \frac{1 + 0.12}{1 + 0.07} \right)^{25} \right] = 42.64$$

$$A = \$10,000 - (\$3,000 + \$2,200) = \$4,800$$

$$B = \$200$$

$$(\$150 \times 42.64) \text{ must be greater than } (\$4,800 + \$200)$$

$$(\$6,396) \text{ must be greater than } \$5,000$$

Therefore, this system satisfies the equation and the requirements of section Ind 18.30 (1).

\*Reference: Energy Tax Act of 1978 (P.L. 95-618).