The committee on Ways and Means, to whom was committed the Senate Bill providing a tax credit for certain solar energy systems (Senate, No. 2181), reports recommending that the same ought to pass, with an amendment, substituting a new draft entitled "An Act providing a tax credit for renewable passive solar energy systems" (Senate, No. 2254).

For the Committee,

JOHN W. OLVER
Section 1. Section 6 of chapter 62, as most recently amended by section 9 of chapter 796 of the acts of 1979, is hereby amended by striking out subsection (d) and inserting in place thereof the following subsection: —

(d) Any taxpayer of the commonwealth who is not a dependent of another taxpayer is allowed a credit for the taxable year for expenditures for qualified renewable energy source property which is installed on property which is the taxpayer's principal residence located in the commonwealth.

(I) Credit for Solar Energy and Wind Systems. — In the case of a dwelling unit the credit shall be determined in one of two ways, according to the following categories: —

(A) Category I shall consist of renewable energy source properties which are thermally isolated from the living space and whose components are distinct from the structure of the building. This category shall include: —

1. Active Solar Energy Systems
2. Thermosiphoning Collector Systems
3. Wind Systems
4. Integrated Collector/Storage Domestic Hot Water Systems
5. Or any other renewable energy source property which the Commissioner specifies by regulation.

(B) Category 2 shall consist of renewable energy source properties which use the structure of a building to provide for the collection and for either storage or distribution of solar energy for heating or cooling and which provide a net gain for the heating season or a net heat loss for the cooling season. This category shall include: —

1. Passive Solar Energy Systems
(2) Or any other renewable energy source property which the Commissioner specifies by regulation.

(II) Amount of Credit for Certain Solar Energy and Wind Systems: — Qualified expenditures for renewable energy source property which fall into Category I shall be the following percentages of the renewable energy source property expenditures made by the taxpayer during the taxable year with respect to said dwelling unit:

(A) 35% of the net renewable energy source property expenditure, up to the maximum credit allowed. The maximum credit allowed shall be $1000.

(B) In no case shall the combined amount of all credits or grants allowed under (d) (II), or under the federal Internal Revenue Code or by any other source exceed 61% of the renewable energy source property expenditure. In such cases where the combined amount of all credits and grants allowed exceeds 61% of the renewable energy source property expenditure those credits allowed under (d) (II) shall be reduced by an amount which makes the combined amount of all credits and grants allowed equal to 61% of the renewable energy source property expenditure.

(III) Amount of Credit for Passive Solar Energy Systems. — Qualified expenditures for renewable energy source property which fall into Category 2 shall be based on a performance standard and shall be calculated in the following manner:

(A) The taxpayer shall determine the amount of energy per year in British Thermal Units the renewable energy source property is projected to produce according to a formula to be set forth by the Commissioner. The qualified expenditure shall be 20% of the renewable energy source property per 1 million British Thermal Units produced per year. For the purpose of this section the renewable energy source property expenditure per 1 million British Thermal Units produced per year shall be $300; however,

(1) The maximum credit allowed shall be $1000.

(2) In no case shall the amount of credit allowed under (d) (III) (A), or the combined amount of all credits or grants allowed under (d) (III) (A) or under the Federal Internal Rev-
enue Code or by any other source exceed 61% of either the total cost of the newly constructed dwelling or the total cost of the modification or additional floor space built on an existing dwelling. In such cases where the combined amount of all credits and grants allowed exceeds 61% of said costs those credits allowed under (d)(III)(A) shall be reduced by an amount which makes the combined amount of all credits and grants allowed equal to 61% of said costs.

(IV) Definitions. — As used in this section the following words shall have the following meanings:

(A) "renewable energy source property" means property:

(1) which, when installed in connection with a dwelling, transmits or uses:

(a) solar energy or any other form of renewable energy which the Commissioner specifies by regulations, for the purpose of heating or cooling such dwelling or providing hot water or electricity for use within such dwelling, or

(b) wind energy for nonbusiness residential purposes;

(2) which can reasonably be expected to remain in operation for at least five years, and

(3) which meets the performance and quality standards (if any) which:

(a) have been prescribed by the Commissioner by regulations, and

(b) are in effect at the time of the renewable energy source property expenditure; and

(4) which shall include both active and passive solar energy systems; and

(5) which has been registered by the Secretary of Energy Resources as being in compliance with sections (d)(IV)(A)(1) through (d)(IV)(A)(4).

(B) "renewable energy source property expenditure" shall mean an expenditure made by the taxpayer for renewable energy source property, including installation cost.

(C) "net renewable energy source property expenditure" shall mean the total of the purchase price for any renewable energy source property, plus installation cost, but less credits, if any, received pursuant to the Internal Revenue Code and
(D) "passive solar energy system" shall mean a system which uses the structure of a building to provide for collection and for either storage or distribution of solar energy for heating purposes and which produces a net heat gain for each month of the heating season provided, however, that said system shall be prescribed as such by the Commissioner.

(E) "active solar energy system" shall mean a system which uses mechanical components or other means distinct from the structure of the building to provide for collection and for either storage or distribution of solar energy for heating or cooling or providing hot water or electricity.

(F) "Thermosiphoning Collector System" shall mean a system which uses natural convection to transport heat from the collector to the living space or associated storage area.

(G) "Integrated Collector/Storage Domestic Hot Water System" shall mean a system which combines the collection and storage of solar energy in a single tank and which operates solely on the water pressure of the structure's domestic water system.

(H) "Reconstruction" of a dwelling shall mean the substantial renovation of a dwelling which significantly improves the livability of said dwelling and which makes major modifications of the entire structure.

(V) Energy Conservation Measures. — Any taxpayer who applies for a credit under (d)(II) or (d)(III) must, in conjunction with the renewable energy source property, install any energy conservation measures specified by the Commissioner in order to be eligible for the credit. Mandatory energy conservation measures shall be determined by the Commissioner, in consultation with the Secretary of the Executive Office of Energy Resources, who shall consider such measures as water restricting devices, ceiling insulation, water heater insulation jackets, caulking and weatherstripping.

(VI) Joint Ownership. — Joint owners of a residential property shall share any credit available to the property under this subsection in the same proportion as their overall interest.

(VIII) Maximum Credit to Taxpayers for Particular Sites.
148 — The maximum credit allowed to a taxpayer for a particular piece of residential property shall be $1000. If for any year a credit was allowed to the taxpayer under this section with respect to any dwelling unit, the maximum credit allowed in subsequent years shall be reduced by the amount of the credit allowed for renewable energy source property expenditures in prior years with respect to said residential property.

(VIII) Carry-over of Unused Credits. — If the credit allowable under this section for any taxable year exceeds the taxpayer’s liability for such taxable year, such excess shall be carried to succeeding taxable years and may be applied to the taxpayer's liability for any one or more of the next succeeding three taxable years; provided, however, that in no taxable year may the amount of the credit allowed exceed the total tax due of the taxpayer for the relevant taxable year.

1 Section 2. This act shall take effect on January 1, 1980. In the case of new construction, residential property for which a building permit has been obtained on or after January 1, 1980, shall be eligible for the credit.

5 The amount of the credit shall remain in effect until December 31, 1983.
The interpretation of the data

The process of data analysis involved the following steps:

1. Data Collection:
   - Gathering relevant data from various sources.
   - Ensuring data accuracy and completeness.

2. Data Cleaning:
   - Removing outliers and errors.
   - Normalizing data to a consistent format.

3. Data Analysis:
   - Applying statistical methods to discover patterns.
   - Identifying trends and correlations.

4. Interpretation:
   - Interpreting the results in the context of the research question.
   - Drawing conclusions and making recommendations.

The final report will be submitted for review in the next week.