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Decision 82 04 025 APR - 6 1982

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Investigation on the Commission's own motion into the feasibility of establishing various methods of providing low-interest, long-term financing of solar energy systems for utility customers.	OII 42 (Filed April 24, 1979)

ORDER MODIFYING DECISION 92251

By petition for modification filed February 19, 1982, the Commission staff seeks to modify Decision (D.) 92251 (September 16, 1980) to establish sizing criteria for nonflat-plate or nonpumped solar water heating systems installed on multifamily dwellings. No such criteria have been established by the Commission

The staff served copies of the petition upon parties to this proceeding, certain manufacturers named in the petition, and other persons believed to be interested in the subject of the petition. No responses have been received. The matter is now ready for decision.

Background

In D.92251 (p. 46 and Appendix C) the Commission adopted certain sizing criteria for traditional flat-plate solar water heating systems on multifamily dwellings. Sizing criteria for these traditional systems were subsequently modified, most recently in a November 3, 1981 letter from Joseph E. Bodovitz, Executive Director, to the four participating utilities.

The Commission recognized in D.92251 that sizing criteria should also be established for other than flat-plate solar systems, and it instituted a procedure for setting sizing criteria for that

equipment on a system-by-system basis (p. 46; D.92501, p.7). As of this date, six manufacturers of such solar systems have submitted applications to the Commission which have been approved in decisions[1/] or in memoranda of understanding.[2/] These decisions and memoranda individually establish sizing criteria for each system for single-family dwellings but do not set sizing criteria for installations on multifamily dwellings.

In its letter of November 3, 1980, noted above, the Commission established for flat-plate, pumped solar water heating systems on multifamily dwellings, a minimum sizing of 20 gallons of solar heated storage per bedroom, and a collector panel area equal to 0.5 times the panel area described in the System Type A (two tank gas) line in the Sizing Chart Handbook.

Petition

The staff recommends that D.92251 be modified to apply the same formula used to size flat-plate, pumped systems for multifamily dwellings to size non-flat-plate, non-pumped solar water heaters. According to the staff the sizing criteria for non-flat-plate, non-pumped solar systems should be set at 20 gallons of solar-heated storage per bedroom plus a minimum collector panel area equal to 0.5 times the panel area per bedroom specified for

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1/ D.93681 (Ying Manufacturing), D.93741 (Sharpe Solar Systems).

2/ Memoranda of Understanding with Burke Manufacturing (8/17/81), Hemet Solar, Inc. (5/29/81), The Amcor Group (A.60349, 6/9/81), and Solahart California (A.60127, 2/25/81).

a three-bedroom single-family dwelling set forth in the decision or memorandum of understanding issued to that firm. Both the solar-heated storage volume and the collector panel area criteria must be satisfied in order for a given system installation to qualify under the OII 42 program. (See Appendix A.)

The staff recommends this change to allow manufacturers of innovative equipment to participate in the multifamily dwelling component of the demonstration program. Participation by these manufacturers will allow customers to choose different types of qualified systems and will promote healthy competition within the industry. Installation of these types of systems on multifamily dwellings under the program will also allow monitoring of these innovative systems, providing the Commission more information upon which to base future actions.

Findings of Fact

1. The Commission has not set sizing criteria for other than traditional, flat-plate solar water heating systems installed on multifamily dwellings.

2. As a consequence, manufacturers of nontraditional systems have been unable to participate in the multifamily component of the demonstration solar financing program.

3. The staff recommends that the Commission set sizing requirements for nonflat-plate, nonpumped solar water heating systems on multifamily dwellings by using the same formula already adopted for flat-plate systems.

4. Under that formula to qualify for participation in the multifamily element of the demonstration program, an installation of nonflat-plate or nonpumped solar water heating equipment must include:

a. A minimum of 20 gallons of solar-heated storage per bedroom, and

b. A collector panel area at least as large as one-half the minimum panel area per bedroom for a three-bedroom single-family dwelling specified in the decision or memorandum of understanding issued to the firms providing other than traditional systems.

5. No opposition to the staff proposal has been expressed.

6. The proposal is reasonable.

Conclusions of Law

1. The staff petition for modification should be granted.

2. Sizing criteria for other than traditional solar water heating systems on multifamily dwellings should be set as described in Finding 4 and in the appendix.

3. The following order should be effective today to provide the affected parties the maximum opportunity to participate in the solar demonstration financing program.

IT IS ORDERED that D.92251 is modified to incorporate the sizing criteria for other than traditional (nonflat-plate or nonpumped) solar water heating systems installed on multifamily dwellings set forth in Finding of Fact 4 and in the appendix.

This order is effective today.

Dated APR 6 1982, at San Francisco, California.

JOHN E. BRYSON
President
RICHARD D. GRAVELLE
LEONARD M. GRIMES, JR.
VICTOR CALVO
PRISCILLA C. GREW
Commissioners

I CERTIFY THAT THIS DECISION WAS APPROVED BY THE ABOVE COMMISSIONERS TODAY.

Joseph E. Bodovitz, Executive Director

APPENDIX A
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Because reduction of collector area by a factor of 0.5 is now permitted for multifamily installations, any fractional requirements resulting from application of these guidelines must be met by installing one additional modular unit, not by eliminating the fractional unit.

Examples for Application of the Rule

In the following situations, consider an example multifamily dwelling of 12 bedrooms. The minimum volume of solar storage is to be 240 gallons in each case, on the basis of 20 gallons per bedroom, regardless of the manufacturer.

The minimum collector area, however, will depend on the applicable decision or MOU as follows:

Manufacturer A

Assume each modular unit consists of 64 square feet (sq. ft.) of collector and 80 gallons of storage.

Assume also that a three-bedroom single-family home in northern california is specified in an MOU to be served by at least one modular unit for program eligibility. The sizing per bedroom would be 21.3 (64/3) sq. ft.

The 12-bedroom multifamily installation would then require 12 x 21.3 sq. ft. x 0.5 or 128 sq. ft. for program eligibility. Therefore, 2 modular units of 64 sq. ft. each would be needed to meet area requirements.

With 80 gallons of storage per modular unit, the 2 units would provide only 160 gallons where 240 gallons are needed.

Therefore, 3 not 2 modular units would be needed to meet both collector area and storage volume requirements.

Manufacturer B

Assume each modular unit consists of 25 sq. ft. of collector and 18 gallons of storage.

Assume also that a 3-bedroom single-family home in southern california is specified in an MOU to be served by at least 6 modular units for program eligibility. The sizing per bedroom would be 2 (6/3) modular units, or 50 sq. ft.

The 12-bedroom multifamily installation would then require 12 x 50 x 0.5 or 300 sq. ft. for program eligibility. Twelve (12) modular units of 25 sq. ft. each would be needed to meet area requirements.

With 18 gallons of storage per unit, 13-1/3 units would be needed to provide 240 gallons.

Therefore 14 units would meet both area and volume requirements.

(END OF APPENDIX A)