

Decision 82 11 008 NOV 3 - 1982

ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Efficiency Systems Company for exemption from certain checklist requirements of Decision Nos. 92251, 92501, and 92769.

Application 82-02-43 (Filed February 18, 1982)

OPINION ON SOLAR WATER HEATER ELIGIBILITY

Efficiency Systems Company (Efficiency) is a contractor and marketer of Lennox Industries Inc.'s (Lennox) LSHW-3 Solarmate Hot Water Heating System. The Lennox LSHW-3 System is currently not eligible in the OII 42 program because of the use of 1/2" ID copper piping in the installation of such a system. Efficiency formally filed its application on February 18, 1982. It was docketed as Application 82-02-43. Efficiency requests that the Commission allow it to use 1/2" copper pipe between the solar collector and the Lennox Control Module for systems installed under the Commission's OII 42 demonstration financing program.^{1/}

^{1/} On September 16, 1980, we issued Decision (D.) 92251 establishing demonstration solar financing programs for Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Edison Company, and Southern California Gas Company. We subsequently modified this decision by D.92501, December 5, 1980, and D.92769, March 3, 1981. In these decisions, we specified a checklist of requirements for domestic solar water heaters. Solar water heaters must meet all sizing and checklist requirements to be eligible for the solar financing program effective March 1, 1981.

Presently the checklist requirements of D.92251, as amended, mandate that the solar system piping must be at least 3/4" type M copper, or better.^{2/} Applicant seeks an exemption from this requirement. Efficiency states that Lennox manufactures two other similar systems that are engineered for maximum efficiency and are equipped with 1/2" pipe fittings for the glycol loop, and therefore Efficiency should be allowed to use 1/2" copper pipe in the LSHW-3 solarmate system.

In this decision, the Commission finds Efficiency's Lennox LSHW-3 eligible for participation in the OII 42 program. The Commission grants Efficiency's exemption from Checklist Item 14, requiring 3/4" copper piping and allowing, in its place, the use of 1/2" type M copper or better. In all other respects, Efficiency shall comply with the checklist requirements as amended.

^{2/} Checklist Item #14 of Appendix A of D.92769, dated March 3, 1981, sets forth as a requirement, when solar hot water heater systems are installed, that the plumbing be 3/4" type M copper or better.

Applicant's Background

Efficiency has been using the Lennox LSHW-3 Solarmate Hot Water Heating System exclusively in its solar installation contracting work. The California Energy Commission received and approved an application from Lennox for certification and warranty requirements for its SC3-32S collector, which is used in the LSHW-3 Solarmate Hot Water Heating System. Lennox, according to Efficiency, has been an industry leader since 1895. Applicant states that the system involved is closed-loop, requiring the use of a mixture of inhibited propylene glycol-based antifreeze and distilled water. Furthermore, Efficiency contends that the Lennox LSTW-1 Transport Control Module product (heat exchanger) is engineered for maximum efficiency using 1/2" pipe fittings for the glycol loop. Moreover, applicant points out that the Commission granted an exemption to Trendsetter Industries (Trendsetter) to use 1/2" copper piping (D.93593, October 6, 1981). This exemption was granted to allow Trendsetter to use 1/2" copper pipes between the solar collector tank and the panels on both the supply and return lines provided that no tap water is used in these lines.^{3/} According to applicant, since tap water is not used, its system will show no loss of efficiency resulting from mineral accumulation.

^{3/} For further details, see page 11 of D.93593 (mimeo).

The Energy Conservation Branch (ECB) believes, and Efficiency agrees, that Lennox's system differs from Trendsetter's only in that Lennox uses inhibited noncorrosive propylene glycol for freeze protection in a 50/50 solution by volume, while Trendsetter uses distilled or de-ionized water in the circulator loop. Applicant contends its system will operate at maximum efficiency, using its noncorrosive propylene glycol with 1/2" ID pipe under the five-year warranty. ECB staff concludes that the Lennox system will eliminate the problem of corrosion by use of the propylene glycol.

Disclaimer of Product Endorsement

Lennox and its installer, Efficiency, will meet the minimum quality and sizing criteria as contained in D.92251, D.92501, and D.92769 and all subsequent decisions and will meet the current standards of the California Energy Commission's Solar Energy Tax Credit Guidelines when installing Lennox systems.

Any reference by Lennox to this order in its correspondence, marketing literature, or media advertising must contain the following full text of this Disclaimer of Product Endorsement:

"The California Public Utilities Commission in no way endorses, recommends, or warrants the durability, suitability, or the reliability, or the short- or long-term energy savings performance of this or any other brand of system or component for domestic water heating or any other application".

While this disclaimer is applicable to any system under our demonstration program, we must be certain that this order is not viewed by the public as an implied endorsement.

We believe that public hearings would serve no useful purpose. This application should be granted ex parte to the extent provided in the following order.

Findings of Fact

1. Efficiency markets and installs the Lennox LSHW-3 Solar-mate Hot Water Heating System solely for its solar installations.
2. The Lennox LSHW-3 System is currently not eligible in the OII 42 program because of the use of 1/2" ID copper piping in the installation of such a system.

3. The Commission has authorized Trendsetter, a manufacturer of solar systems, an exemption from the checklist to use 1/2" copper tubing between the solar collector tank and the panels on both the supply and return lines.

4. Efficiency provides a five-year warranty on the Lennox LSHW-3 Solarmate Hot Water Heating System.

5. The California Energy Commission received and approved an application from Lennox for certification and warranty requirements for its SC3-32S collector, which is used in the LSHW-3 Solarmate Hot Water Heating System.

Conclusions of Law

1. The Commission finds that propylene glycol fluid provides reasonable protection against corrosion.

2. This application should be granted as set forth in the order below.

3. The following order should be effective the date of signature in order to allow participation in the solar financing program and competition with other solar manufacturers at the earliest time.

4. A public hearing is not necessary.

O R D E R

IT IS ORDERED that

1. Efficiency Systems Company in the use of Lennox Industries Inc.'s LSHW-3 Solarmate Hot Water Heating System is eligible to participate in the OII 42 Demonstration Solar Financing Program subject to the conditions set forth below.

2. Efficiency Systems Company, when marketing and installing Lennox Industries Inc.'s LSHW-3 Solarmate Hot Water Heating Systems is granted exemption from Checklist Item 14, allowing it to use 1/2" type M copper piping instead when used with propylene glycol fluid in its recirculation loop.

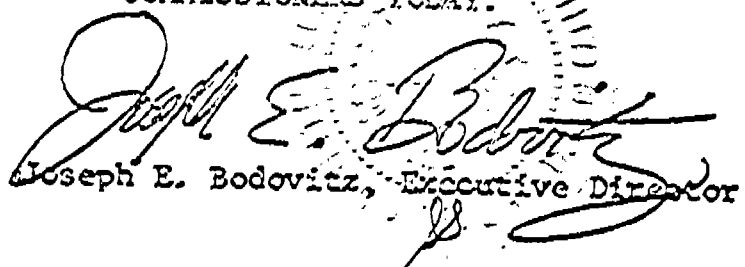
3. Except as granted and provided by this order Efficiency Systems Company, when marketing and installing Lennox Industries Inc.'s LSHW-3 Solarmate Hot Water Heater System shall adhere to all other currently effective requirements set forth in D.92251, D.92501 and D.92769 or subsequent orders in this proceeding including the Disclaimer of Product Endorsement.

This order is effective today.

Dated NOV 3 1982, at San Francisco, California.

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

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


Joseph E. Bodovitz, Executive Director