\$E. 2 SERI/TP-744-466R

> SERI/TP-744-466R UC CATEGORY: UC-58,58d

SOLAR ENERGY RESEARCH INSTITUTE
Solar Energy Information Center

PROPERTY OF U. S. GOVERNMENT

JUL 1 4 1980

GOLDEN, COLORADO 80401

PRODUCT LIABILITY INSURANCE FOR WECS

ROBERT J. NOUN

JUNE 1980

PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN SECTION OF THE INTERNATIONAL SOLAR ENERGY SOCIETY, JUNE 1-6, 1980, AT THE PHOENIX CIVIC PLAZA, PHOENIX, AZ Solar Energy Research Institute

A Division of Midwest Research Institute

1617 Cole Boulevard Golden, Colorado 80401

Prepared for the U.S. Department of Energy Contract No. EG-77-C-01-4042

NOTICE

中世一世界以上 医中毒性医皮肤的 人名西斯特 电扩张 野

THE THE WAY TO SEE A

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States nor any agency thereof, nor any of their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for any third party's use or the results of such use of any information, apparatus, product, or process disclosed in this report, or represents that its use by such third party would not infringe privately owned rights.



1.0 CURRENT INSURER ATTITUDES TOWARD WIND ENERGY CONVERSION SYSTEMS (WECS)*

Preliminary findings from our sampling of manufacturers indicate that, in many cases, product liability insurance for WECS is still difficult to obtain. About half of the 21 WECS manufacturers we contacted said they did not have product liability insurance. About one manufacturer in three who attempted to obtain insurance was rejected by at least one insurance company. In some instances, although an insurer had offered to provide coverage, the manufacturer found the rates quoted to be prohibitively expensive. For example, in one case a WECS manufacturer had been offered product liability insurance, but at an annual rate of 30% of his gross sales.

Some manufacturers who had insurance were able to tell us what their annual premiums were. But this information was of little use since they could not tell us the rates on which the premiums were based. The range of premium cost was very broad—between \$130/year to over \$10,000/year. We suspect there is some correlation between the insurer's decision to accept a risk and the rate he quotes, and the size, experience, and reputation of the WECS manufacturer seeking insurance. In other words, the larger, established firm may be receiving the more favorable rate. We found the limits on coverage to be fairly uniform—generally \$300,000 per occurrence for bodily injury and property damage.

Only a handful of insurers who had previously considered WECS were identified by the sample. Nonetheless, when we compared the comments of these few insurers with the responses of WECS manufacturers who had contacted insurers directly, we were able to identify some common concerns.

First, insurers still appear to be uncertain about WECS operation in the field. The lack of product experience and the lack of WECS standards were cited as the key sources of this uncertainty. We note, however, that merely developing WECS standards, and encouraging a manufacturer's compliance with them, will not necessarily make a WECS "legally" safe; nor will the establishment of standards automatically improve the prospects for obtaining affordable liability insurance. Our legal study indicates that insurers are well aware that the weight that courts place on standards in a product liability case will largely depend on the procedural credibility of the organization that produced the standards. For WECS standards to have a favorable impact on the availability and cost of insurance, they must be developed through a reputable and thorough standard-setting process.

Second, both the availability and cost of WECS liability insurance may be highly sensitive to the existing legal climate in the state (or states) where the WECS manufacturer is doing business. For example, we found that because of the substantial product liability judgments recently awarded against manufacturers in California, insurers in that state may be more conservative in their risk assessment of WECS, with higher rates reflecting the concern for increased exposure to liability. While it has been noted that such cases

^{*}These remarks are derived primarily from an informal sampling of WECS manufacturers and insurers and from a study by the author, <u>Product Liability and Small Wind Energy Conversion Systems: An Analysis of Selected Issues and Policy Alternatives.</u> Golden, CO: SERI/TR-354-365; December 1979.



appear to be relatively few, insurers have regarded them as quite important in their pricing practices. As the Interagency Task Force (ITF) observed, insurance company ratemaking is an area where "perceptions of reality become as important as reality itself."*

The ability of WECS manufacturers to obtain affordable liability insurance for their products may be more constrained by the present legal climate than is the case for other manufacturers. WECS essentially are new products. There is little WECS performance data, and no claims experience, upon which prospective insurers can determine rates. Moreover, WECS are being designed for broad, new applications in unfamiliar use environments. There are no industrywide safety standards to guide safety considerations. In short, insurers are faced with assessing risk exposure and potential liability for an untried product. In such circumstances, the uncertainties and alleged unfairness in the present legal system regarding a manufacturer's responsibility for his product may be an even greater burden for WECS manufacturers seeking to obtain insurance.

One of the insurers we spoke with told us that in view of the present legal climate and lack of WECS product history and standards, the internal safety considerations of manufacturers would be an important factor in assessing risk exposure and potential liability of WECS. Our legal study found that one of the reasons given by insurers, in general, as to why premiums may be less affordable for small companies is that some small firms are less able to keep abreast of and implement technological advances relating to product safety. We think this is a significant finding when applied to the WECS industry—an industry that now largely comprises small manufacturers—and its ability to obtain affordable liability insurance.

2.0 THE IMPACT OF PRODUCT LIABILITY PREVENTION ON WECS INSURANCE

The ITF final report found that one of the basic causes of the product liability problem is that some manufacturers are producing unreasonably unsafe products. A review of 655 appellate cases dealing with product liability strongly suggested that careful quality control would have eliminated the basis for many of those lawsuits where a defect in construction was alleged. The problem facing WECS manufacturers is the same problem that confronts many businesses today—the lack of financial resources or technical knowledge to implement some kind of product liability prevention program on their own.

If the WECS manufacturer gives the same attention to the legal elements of product performance and safety, as the courts do after an injury has occurred, its potential liability can be minimized. The end result of analyzing concepts like foreseeable use and probability of harm is the marketing of the most reasonably safe product possible. The ITF sampling of product liability cases lends persuasive support to this notion. The mechanism for ensuring that unsafe or defective products do not enter the market is the product liability prevention program (PLPP).

A PLPP may take many forms and may be identified under various titles such as product safety, product assurance, and risk management practices. Generally, a comprehensive

^{*}Interagency Task Force on Product Liability, Final Report. U.S. Department of Commerce: 1977.



PLPP will contain elements that describe manufacturer responsibility from initial design and production through marketing and service. Almost all PLPPs stress a number of similar processes. These include quality control, design review, labeling and packaging improvement, review of advertising and warranties, and, when applicable, greater emphasis on maintenance and servicing procedures.*

As each element in this process is addressed, its effects on product usefulness and cost must, of course, be introduced. The WECS manufacturer should recognize, however, that the cost of its product is not based merely on materials, labor, marketing, and profit. Part of the cost is for injuries from the fraction of machines that may be marketed with a production flaw or from hazards that the final design fails to minimize. Whether such costs are, in part, paid through liability insurance premiums, settlements, or legal fees is unimportant; they are part of the real cost of the product and should substantially affect decisions about what to incorporate in the final design.

Perhaps the most significant benefit of a PLPP to WECS manufacturers is that it can take product misuse into account in the design, testing or other appropriate stage of manufacture. The element of foreseeable use is often a decisive factor for the judge and jury in a product liability case. However, as a practical matter, a PLPP itself is not a defense in such a case; only its result—a reasonably safe product—offers a defense to liability. But product liability prevention programs clearly offer an opportunity for risk prevention where it is potentially most effective, and this effort, in turn, could favorably affect insurer attitudes toward WECS.

3.0 THE FEDERAL ROLE

There are two ways of looking at WECS product liability insurance issues. One approach could be to examine the symptoms of the current product liability problem as they apply to WECS manufacturers. This might include consideration of proposals aimed at reducing the present high cost of liability insurance. Or it might mean examining the alternative sources of insurance. Examples of the kind of alternative insurance program are: (1) a federal product liability insurance program for WECS manufacturers, (2) federal reinsurance, (3) a mandatory or voluntary pooling mechanism, (4) permission to a qualified WECS manufacturer to set aside a portion of his pretax income to fund a specific reserve for self-insurance against product liability claims, and (5) modification of federal tax laws to encourage the formation of WECS captive insurance companies.**

While such remedies might reduce the costs of product liability insurance and make such insurance more readily available to WECS manufacturers, they could also obscure the real causes of the problem and thereby delay meaningful long-term solutions. On the

^{*}Interagency Task Force on Product Liability, Final Report. U.S. Department of Commerce; 1977.

^{**}These proposals are derived from the U.S. Department of Commerce's Options Paper on Product Liability and Accident Compensation Issues. Fed. Reg. Vol. 43 pp. 14618-14620; April 6, 1978.



other hand, dealing with the causes will take some time. Non-cause-related measures have the advantage of providing immediate relief to WECS manufacturers who now have difficulty in obtaining affordable liability insurance. In any event, alternative insurance remedies will be thoroughly addressed in a forthcoming U.S. Department of Energy (DOE) study.*

The other approach to WECS liability issues, dealing with causes, might start with the unsafe product. The failure of some manufacturers to use effective product liability prevention measures that incorporate the relevant legal requirements leads, in turn, to more product-related injuries and claims. This, in turn, leads to greater insurance and other costs for manufacturers and ultimately for the product consumer. If, however, a manufacturer has (1) the necessary product safety information, (2) an adequate set of industry standards to establish a minimum level of safety, and (3) sufficient financial resources to implement product liability prevention and safety design review procedures, it can minimize potential liability and improve the prospects for obtaining affordable liability insurance. The following policy alternatives define a potential DOE role in this area.

3.1 Sharing Product Risk Information With WECS Manufacturers

As previously noted, one of the reasons given by insurers as to why liability insurance may be less affordable for small companies is that some small firms are less able to keep abreast of and implement technological advances relating to product safety. A program coordinated by DOE for acquiring and sharing WECS risk information with the industry would address this problem. Such information would involve specific characteristics of the machines associated with potential WECS-related accidents. WECS safety and performance data collected at Rocky Flats, after it is translated into risk data, could provide a useful starting place for gathering the necessary information. The essential feature of such a program would be its ability to get the information into the hands of the WECS manufacturer quickly.

3.2 Assisting The Development Of WECS Standards Through A Reputable And Thorough Standard-Setting Process

As previously indicated, the relevant issue in a product liability case regarding standards is whether they were produced by a reputable organization based on an open, objective, and thorough standards-setting process. DOE already plays an intermediate role in assisting private-sector development of WECS safety standards. DOE could focus more on the adequacy of the WECS standards development process from a legal perspective. Hastily developed standards may be either too stringent, and thus incapable of being complied with by certain manufacturers, or too flexible, and thus of questionable value for establishing a reasonable minimum level of safety. In either case, the potential long-term damage to WECS commercialization could be sizable if the standards and the process by which they were produced were not carefully and continually assessed in light of existing legal and procedural requirements.

^{*}Rockwell International, Energy Systems Group (Rocky Flats Plant). Study of Product Liability Insurance Issues Related to Small Wind Energy Conversion Systems. RFP No. PF 97896L; 1979.



3.3 Providing Technical Assistance In The Area of Product Liability Loss Prevention To WECS Manufacturers

Insurers are expected to continue to assess the product safety practices of manufacturers. However, greater involvement by insurers in this process has increased the cost of providing insurance coverage. For large firms, product safety services provided by the insurer represent only a small fraction of the total premium cost. However, the cost of liability prevention insurance services may often be prohibitive for small manufacturers. Because the WECS manufacturing industry largely comprises small businesses, few of these firms are likely to be able to use available product liability prevention services offered or required by insurers.

Three options could be considered for federal assistance to WECS manufacturers to assure the availability of product liability measures:

- Require WECS manufacturers to use reasonable product liability prevention techniques as a "quid pro quo" for participation in federal reinsurance or pooling programs;
- Provide direct DOE or other federal assistance to WECS manufacturers in the area of product liability prevention; and
- Establish a special loan program directed at providing loss prevention technical assistance to WECS manufacturers who would otherwise be unable to afford it.

