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SERI/TP-753-1155
UC Category: UC-58c

R-3911
CONF-810509--18

DIFFUSION OF SOLAR INNOVATIONS IN
THE MARKETPLACE THROUGH TELEVISION
NEWS PROGRAMMING

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APRIL 1981

PREPARED UNDER TASK NO. 513-7603

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

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Printed in the United States of America
Available from:
National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
Price:

Microfiche \$3.00
Printed Copy \$4.00

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**DIFFUSION OF SOLAR INNOVATIONS THROUGH
TELEVISION NEWS PROGRAMMING**

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ABSTRACT

This paper presents the rationale, methodology, finished product, and evaluation of a series of short, topical films of various solar applications. They were produced for use on prime-television news programming. Two of the films will be shown.

electric power production. Solar water heating is the most widely used application, although 150,000 installations are a small impact on the potential of perhaps 100 million. The real impact is beginning to be made through aggressive advertising, mass marketing, and incorporation as a standard feature in tract homes. Sun City West in Arizona will increase the solar water heater population by 35,000.

1. INTRODUCTION

A number of useful solar energy applications have demonstrated their technical feasibility and have achieved some acceptance in the marketplace. There is a general agreement that solar energy is "good" and that it can replace other less "good" or less available energy resources. However, solar installations have barely scratched the surface of the huge commercial market. If solar is so good, where is it?

During the past decade much effort has been expended to inform the public about the uses and potential benefits of solar energy. Despite wide-ranging informational campaigns emanating from both public and private sources, surprisingly little empirical evaluation of the impact of such messages on the public has been carried out. The problem is particularly acute in instances where broadcast media public service announcements and news releases are used as dissemination vehicles. Public exposure to such messages is wholly dependent upon the willingness of broadcast stations to air them, and it has generally been quite difficult for disseminating agencies to find out whether their messages were actually aired and to identify stations' criteria for deciding which materials to air and which to discard.

The reasons, generally, are not scientific or technical but socioeconomic. Solar entrepreneurs have succeeded technically but failed as marketers. They have operated on the premise that solar energy, being scientifically different from conventional energy, is likewise different in marketing aspects. In the worst case, they assume its novelty will sell it. In fact, solar energy must compete in the market place as conventional equipment does, and be sold by the same techniques. Complicating the task is the fact that while solar is not all things to all people it is many things. And must be sold in many ways.

The research reported here investigates the extent to which commercial television stations used a series of solar-energy-related videotaped news releases and their reasons for using the spots. The conclusions point to recommendations for improved dissemination techniques as well as evaluation procedures.

While the backyard solar pioneer is to be admired and appreciated, he has about completed his role in commercialization. Such "early innovators" represent only a tiny fraction of the market. They are markedly atypical as well, because of what G. K. Chesterton long ago labeled the "want of wonder." Most consumers give only token acknowledgment to solar; their buying habits remain the same. Successful solar marketing must be done in much the same way that the marketing of conventional homes, water heaters, electric power, and fuel is done.

2. RATIONALE

Given the mission of informing and educating the potential solar consumer, SERI's Communication Branch decided to try to place up-to-date news of the various solar technologies on live TV news programs. It was realized at the outset that placement would be more difficult than as Public Service Announcements (PSAs). However, it was at the same time obvious that live news programs reach a much larger audience than do PSAs. The latter are often shown at odd hours, such as 6 a.m. Sunday, and their use is of course at the discretion of the station.

Solar energy has been demonstrated as feasible for water heating, space heating, fuel distillation, and

It was decided that film production and distribution would be contracted out. This decision reflected a desire to maintain a tight schedule for the news spots in the interest of continuity. A contractor was selected and a series of three 90-second news spots was funded. The Communication Branch provided rough scripts, editing, overview, and final approval. Scripts and answer prints were also approved by the Department of Energy (DOE). Sixteen-millimeter sound-on-film prints, plus tape cassette and hard copy of script were provided. Fifty television stations were selected and a return-mail evaluation form designed.

Upon completion of the three pilot films, a contract for five more spots (later increased to seven) was let on a competitive basis. A different station list was used, and two-inch videotapes were distributed instead of sixteen-millimeter film. Furthermore, a separate contract was written with University of Denver (DU) for evaluation of the use of the news spots by stations receiving them.

A total of ten news spots was produced and distributed. These covered: Solar Tax Credits (two spots), Solar Homes, Gasohol, Solar Water Heaters, Passive Solar Energy, Windmills, OTEC, Irrigation Pumps, and Photovoltaics. In addition to TV station distribution, SERI sent film copies of the spots to the Regional Solar Energy Centers, AS/ISES, DOE, NSHCIC, and a few others. The films were also used by SERI speakers to illustrate talks on solar energy.

DU's Department of Mass Communications evaluated pickup and rating of each of five news spots in depth. As a result of the individual evaluations, several changes were made in the distribution list. DU also provided a final detailed report of aggregate use of all spots.

The TV solar news spot program demonstrated that such material can be placed in news programming and thus reach a large audience. Added benefits include subsequent use of footage in special TV programs and an increased station interest in solar energy and receptivity to information about it.

3. METHODOLOGY

The solar energy news releases were produced in 1980 as part of SERI's Solar Awareness Program, designed to increase public awareness of solar energy via the mass media of radio and TV. Each of the five releases dealt with a different aspect of solar energy, and they were mailed over a 5-month period to 50 commercial television stations across the country with the highest early evening news ratings in their individual market areas. Station receptivity to and use of the releases was evaluated by mail questionnaires and telephone interviews.

Specifically, the questionnaires and interviews were used to determine: (1) Which stations aired all or part of the news releases; (2) Characteristics of stations using the spot; (3) Reasons for airing or

not airing the releases; (4) Station personnel ratings of the production quality and news value of the releases; and (5) General attitudes of station personnel toward using unsolicited news releases. Data were successfully gathered for 136 of the 250 release mailings, or for 54% of the events under study. The overall distribution of responses suggested that the sample was representative of the targeted stations as a group.

4. EVALUATION

In all, 19 different stations of the 50 stations reported use of the releases (see Table 1). In nearly half of the instances in which a release was used at all, it was aired in its entirety. In other cases, the stations typically used a portion of the video with a voiceover provided by local staff. Most stations aired the releases during early evening newscasts, suggesting that the spots were viewed as having news value (see Table 2). The stations which most consistently used the releases were those in the smaller market areas, although the spots were occasionally aired by top 20 market stations as well, particularly in sunbelt regions. Several stations indicated that they intended to hold the releases for possible future use in documentaries or series about energy-related matters. Most stations said they regularly used only about 10% of the 20 or so videotaped news releases they received during an average month. The greater acceptability of the solar energy news releases appeared to be related to station ratings of the spots as above average professional quality and to perceptions by station personnel of solar energy having high public interest and news value (see Table 3).

In the final analysis, the sale to consumers of solar energy products in the technologies named is the evidence of the diffusion of innovation and the penetration of the market. How much of that penetration results from media outreach of the kind described in this paper can only be surmised. However, marketers in other fields rely heavily on television exposure. Pickup of the solar news spots described was better than that experienced by PSAs, demonstrating that television news programmers are receptive to solar developments. Also, the solar spots were typically aired on the prime-time early evening news when millions of viewers were watching; PSAs commonly air during the poorest viewing periods when stations fulfill their public service obligations with the cheapest time slots.

General comments concerning use of releases indicated an overriding concern with the amount of editorial control the station had over the material. While only a few stations in the top market areas appeared to always refuse outside material as a policy, most stations suggested that they used such releases very seldom and only under optimum conditions. Local audience interest in the subject matter and inability of the station staff to easily provide similar material seemed to enter very strongly into decisions regarding use. Good tech-

Table 1. MODE OF USAGE
(n=38)*

Tape plus sound	21
Tape plus voiceover from own script	14
Tape plus voiceover from script provided	1
Not ascertained	$\frac{2}{38}$

*Includes multiple use by same TV stations. In all, 19 different stations used the solar news spots.

Table 2. TIME OF USAGE
(n=38)

Weekday early evening newscast	21
Weekday morning or noon newscast	7
Weekday late evening newscast	2
Weekend newscast	4
Other (news feature programs, etc.)	3
Not ascertained	$\frac{1}{38}$

nical quality along with journalistic style were also regarded as important, and several stations indicated a clear avoidance of releases with any hint of obvious bias or "hype." Presumably, tapes from "respected" sources such as educational institutions or governmental agencies provide more of an aura of credibility than those from commercial organizations. Many editors said they preferred releases with visuals that might be used as backup or file footage, although those uses might mitigate against airing the spots in the format intended by the sponsor. Many stations also indicated that releases often have value for tipping them off to stories they might not have considered otherwise, even if they do not use the actual spot. Two stations suggested an interest in "raw tape footage" on relevant news items, which they could use as backup for their own stories.

As for the reactions to the SERI spots themselves, there was a heavy emphasis on the topicality of solar energy as a legitimate news item. Many stations in sunbelt areas also saw local interest in the subjects dealt with, a few noting that they had tied a SERI piece to solar energy developments taking place within their own market areas. For the most part, the technical quality and storylines were seen as appropriate and in some cases they were praised. The combination of subject matter and quality seem to have worked together to make the SERI spots more acceptable than most others (see Table 4).

Table 3. SPOT ATTRIBUTE EVALUATION SUMMARY
A. Category Totals for All Spots (n=50)

	Excellent	Good	Fair	Weak	Poor
Subject matter	22	23	2	-	-
Interest to viewers	11	32	2	1	-
Sound	11	26	5	1	-
Editing	10	25	11	-	-
Photography	6	25	13	2	1
Storyline	7	30	6	3	-
News peg	7	24	11	2	2
Script style	4	19	16	4	2

B. Mean Scores per Spot (Excellent=5; Poor=1)

Spot No.	1 (n=14)	2 (n=8)	3 (n=12)	4 (n=6)	5 (n=7)	Total (n=47)
Subject matter	4.4	4.6	4.2	4.5	4.6	4.4
Interest to viewers	4.1	4.3	4.3	4.2	4.1	4.2
Sound	4.0	3.9	4.1	4.2	4.0	4.1
Editing	4.0	3.9	4.2	4.0	3.7	4.0
Photography	4.5	4.4	3.5	4.2	3.7	3.9
Storyline	3.7	4.3	3.2	3.1	4.0	3.9
News peg	3.6	4.1	3.4	4.0	3.8	3.7
Script style	3.2	3.2	3.2	3.2	3.7	3.3

Table 4. EXAMPLE OF STATION RESPONSES TO INDIVIDUAL SPOTS
Spot 1 (Solar Hot Water News Spot)

Station	Market	Rank	Date Rec.	Summary
(EASTERN) WFLA	Tampa	17	1/24	Use 1:59 in 2:05 story; Both film and sound; Weekday noon news.
WSB	Atlanta	16	1/25	Use 0:55 in 1:14 story; Film with voiceover; Weekday early evening news. "Solar energy is in the news here."
WCMH	Columbus	32	2/1	Will use, decide seconds later; Both film and soundtrack; Weekday noon news. "Timely, people are interested, good quality spot."
(MIDWEST) WMC	Memphis	35	2.1	"Don't use handout material."
KOCO	Okla. City	38	2/6	"Will not air."
(MOUNTAIN) KRDO	Colo. Spgs.	103	2/1	Will use possibly as filler "as other solar stories develop."
KMGH	Denver	21	2/1	Will use and work into Consumer Reporter story; film with voiceover; Weekday early evening news.
KXLF	Missoula- Butte	153	2/11	Will use visual as needed "for stories on solar panels."
KYEL	El Centro- Yuma	184	2/4	Use 1:19 in 1:19 story; Both film and sound; Weekday early evening news.
KBIM	Roswell	182	2/7	Use 1:59 in 2:15 story; Both film and sound; Weekend newscast; "New Mexico is a primary area for solar development."
KOOL	Phoenix	33	2/13	Use 1:59 in 30 min. weekend children's news show; Both film and sound. "News dept. rarely uses free footage."
(PACIFIC) KCRA	Sacramento	24	1/23	Will use; uncertain as to format or time.
KOIN	Portland	22	1/23	Don't use handouts; may file for footage.
KRCR	Redding	145	1/24	Won't Use. "Sync disturbance in tape at one point. We avoid tapes that will break when played on air."
KFSN	Fresno	69	2/11	Will use, don't know seconds yet; both film and sound; Weekend news; "Timely."

Based upon these findings, recommendations were made for more effectively choosing stations likely to air such releases, improving station acceptance of energy spots and providing more efficient evaluation techniques.

5. SUMMARY

Too many of us have tried to reshape the existing world to fit solar energy. Success lies in the other direction. We must offer a product that fits the market. There is not one solar product but many. All of them are different and must compete in a different way. Successful entrepreneurs realize that fact of socioeconomic life and work within its framework.