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## Strategic Planning of Communications and Knowledge Transfer for the Solar Energy Technologies Program

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Presented at the 2005 DOE Solar Energy Technologies Program Review Meeting November 7–10, 2005 Denver, Colorado Conference Paper NREL/CP-840-39014 November 2005



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## **ABSTRACT**

The goal of the Solar Communications Team is to get the right information to the right people at the right time in the right form at the right cost, and to measure the effectiveness of projects and our strategic communications plan. Our communications efforts in FY 2005 emphasized the following:

- Reaching the Buildings and Consumer audiences (e.g., Solar Decathlon, International Builders' Show).
- Developing and distributing critical program documents to key stakeholders (e.g., Solar Program Review Meeting Proceedings, Industry Roadmap, second Multi-Year Program Plan).
- Conducting a gap analysis of communications products and evaluating their effectiveness.
- Working with our program management to streamline business processes and improve communications of management expectations.
- Developing and maintaining content for all Solar Program Web sites that reflect research and program accomplishments.
- Representing the interests of the Solar Program at strategic events (technical conferences, meetings, workshops, community events).

## 1. Objectives

According to the 2003–2007 Multi-Year Technical Plan, "Promoting and communicating benefits and results are key elements of effective partnering. At the most basic level, technology cannot be transferred from DOE-sponsored research without communications..." In the spirit of the MYTP, our team focuses on innovative ways to reach critical audiences and improve business performance.<sup>2–4</sup>

Our communications team, with members from DOE, NREL, and Sandia, seeks to unify the outreach efforts of the Solar Program so that communications and knowledge transfer emphasize all, rather than individual, solar technologies. We work with our research brethren to ensure accuracy in the information we develop and distribute on their behalf. Our goal is to promote understanding, collaboration, and partnership to advance solar energy technologies.

The Solar Program helps to direct and support advances being made in the solar technologies of photovoltaics, concentrating solar power, and solar heating and lighting. The program uses communications products and activities to inform and

persuade audiences, move them to action, and help overcome barriers for particular technologies and applications. In our second year of "living the plan," the communications team is refining the implementation section of the plan to improve project tracking, cost monitoring, and usability. Additionally, the team is working with program management to streamline planning and budgeting processes to maximize our efforts in supporting solar energy research.

In FY 2006, we want to refine a metrics process to measure effectiveness of selected projects and the plan, prioritize projects and complete high-priority projects, and seek strategic connections with other activities and programs. Specifically, metrics are needed to determine whether audiences are hearing, understanding, and acting on the Solar Program messages.

## 2. Technical Approach

Our planning efforts evolved from the following simple objectives: (1) represent the Solar Program appropriately, (2) save money by reducing duplication of effort among separate subprograms, (3) brand all communications and outreach products and activities in a consistent and appropriate manner.

Our team has come to view our core activities as covered within four primary areas: (1) Planningactivities associated with strategic planning, budgeting, and aligning with the Solar Program's system-driven approach; (2) Developing and producing—activities associated with creating and producing a variety of communications products, including print, Web, and exhibits, to convey research results and program's messages: (3) Transferring knowledge—activities associated with transferring research and program information (both internally and externally) to critical audiences from the national laboratories and program management; (4) Measuring—activities associated with measuring and assessing the relationships to critical audiences and the effectiveness of messages to them.

#### 3. Results and Accomplishments

Below is a brief review of accomplishments within the four primary areas just described:

#### Planning

The team communicates on a regular basis through conference calls and an annual workshop to collaborate on projects, update the plan, and evaluate progress. In FY 2005, the communications team spent a majority of its time in the "implementation" and "assessment" phases of planning. Implementation is executing proposed communications projects in support of Solar Program messages to our key audiences. Assessment is answering "how did we do?" and "how are we doing?"

The team identified several lessons learned regarding the strategic planning process. Specifically, we need to do the following:

- Evaluate our strengths and weaknesses annually to better understand "where we are" and "where we want to be" in terms of the impact we want to have on critical audiences.
- Work more on the "where we want to be" with critical audiences.
- Improve the usability and integration of the implementation plan in our business processes for budgeting, costing, and accountability.
- Develop a metrics process as part of our strategic planning effort to assess how we are doing or how we did.

#### Developing and producing

- Completed Proceedings CD-ROM for the 2004 Solar Program Review Meeting, which includes pdfs of 2page papers for all subtask activities.
- Completed Solar Program Annual Report, FY 2004, which include extended papers for all subtask activities, plus summaries on major task areas.
- Planned and facilitated communications strategies around the development of the "Home by Design" house for the 2005 International Builders' Show.
- Designed and produced an historical exhibit for the 2005 ISES conference.
- Assisted in producing the 2007–2011 Solar Program Multi-Year Program Plan.
- Assisted in the communications needs and logistical planning for the 2005 Solar Decathlon.
- Assisted in developing the second Solar Industry Roadmap.
- Prepared the IEA PVPS: U.S. National Survey Report with W. Bower of Sandia.
- Contributed to the IEA PVPS: Trends Report.

## Transferring knowledge

- We have interacted with the builders and consumer audiences in such events as the International Builders' Show, Solar Decathlon.
- The Solar Program Web site has especially focused on content for consumers.
- The PV Manufacturing R&D Project Web site, completed in FY 2005, includes searchable summaries of all contracted research completed and in progress from all research partnerships.
- We also reached others within the solar community at SEPA's Solar Power 2005 conference and the 2005 ISES Solar World Congress.

## Measuring

A metrics framework for communications is needed. As we develop the process and collect data, this will allow us to:

- Make better business decisions.
- Measure the impact of messages.
- Show relevance, in the longer term, to research through indirect and direct correlations.
- · Control costs.
- Demonstrate our value to our management.

### 4. Conclusions

Successfully executing the communications plan will continue to require coordinating with many people at DOE, NREL, and Sandia. Ongoing follow-up with all participants will be essential to ensure that they:

- Understand their role and the importance of their contribution to the overall communication effort.
- Have what they need to do their part in "making things happen."
- Are actually doing what needs to be done.
- · Receive feedback on the results of their activities.
- Have the flexibility to adjust strategies and tactics to accommodate change in communications priorities.

Paramount to the success of the plan is the commitment of everyone involved with the Solar Program to keep our resources and attention focused on the spirit of the plan. In doing so, we will successfully achieve the Solar Program's strategic objectives and build awareness of solar energy technologies.

## **ACKNOWLEDGEMENTS**

We thank Ray Sutula (DOE) and Larry Kazmerski (NREL) for their support. NREL work was performed under DOE contract DE-AC36-99-GO10337. Sandia work was performed under DOE contract DE-AC04-94AI 85000.

## **REFERENCES**

- <sup>1</sup> U.S. Department of Energy, Solar Energy Technologies Program—Multi-Year Technical Plan, 2003-2007 and Beyond, 143 pp., DOE/GO-102004-1775 (January 2004).
- <sup>2</sup> S. Pedigo and others, *Solar Energy Technologies Program—Strategic Communications Plan, 2004 and Beyond*, 44 pp., internal NREL report (2005).
- <sup>3</sup> S. Pedigo and others, *Solar Energy Technologies Program—Strategic Communications Implementation Plan*, Excel others, Solar Program—spreadsheet (2005).
- <sup>4</sup> S. Pedigo and others, Communications Gap Analysis, Excel spreadsheet (2005).

#### **MAJOR FY 2005 PUBLICATIONS**

See the "Developing and Producing" list in the Results and Accomplishments section above.

## REPORT DOCUMENTATION PAGE

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1.	REPORT DATE (DD-MM-YYYY)  2. REPORT TYPE			3. DATES COVERED (From - To)		
	November 2005	Conference Pape	er			
4.	TITLE AND SUBTITLE Strategic Planning of Communications and Knowledge Transfer for the Solar Energy Technologies Program		5a. CONTRACT NUMBER DE-AC36-99-GO10337			
			5b. GRANT NUMBER			
			5c. PROGRAM ELEMENT NUMBER			
6.	AUTHOR(S) S. Pedigo, R. Nahan, S. Moon, D. Gwinner, J. Zuboy, C. Brooks, T. Wilson, R. Hassett, and W.B. Burt			5d. PROJECT NUMBER NREL/CP-840-39014		
	1. Wilson, T. Hassett, and W.B. Balt		5e. TASK NUMBER PVC6.1201			
			5f. WORK UNIT NUMBER			
7.	PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) National Renewable Energy Laboratory 1617 Cole Blvd. Golden, CO 80401-3393				8. PERFORMING ORGANIZATION REPORT NUMBER NREL/CP-840-39014	
9.	SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S) NREL	
					11. SPONSORING/MONITORING AGENCY REPORT NUMBER	
12.	2. DISTRIBUTION AVAILABILITY STATEMENT  National Technical Information Service  U.S. Department of Commerce  5285 Port Royal Road  Springfield, VA 22161					
13.	3. SUPPLEMENTARY NOTES					
	14. ABSTRACT (Maximum 200 Words)  The goal of the Solar Communications Team is to get the right information to the right people at the right time in the right form at the right cost, and to measure the effectiveness of projects and our strategic communications plan. Our communications efforts in FY 2005 emphasized the following: 1) Reaching the Buildings and Consumer audiences (e.g., Solar Decathlon, International Builders' Show). 2) Developing and distributing critical program documents to key stakeholders (e.g., Solar Program Review Meeting Proceedings, Industry Roadmap, second Multi-Year Program Plan). 3) Conducting a gap analysis of communications products and evaluating their effectiveness. 4) Working with our program management to streamline business processes and improve communications of management expectations. 5) Developing and maintaining content for all Solar Program Web sites that reflect research and program accomplishments. 6) Representing the interests of the Solar Program at strategic events (technical conferences, meetings, workshops, community events).					
15. SUBJECT TERMS Photovoltaics; solar; knowledge transfer; solar program; PV; NREL						
	SECURITY CLASSIFICATION OF: REPORT b. ABSTRACT c. THIS P	17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME C	OF RESPONSIBLE PERSON	
	nclassified Unclassified Unclas	111		19b. TELEPO	DNE NUMBER (Include area code)	