



*laboratory
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Frank Wilkins
Team Leader, Concentrating Solar Power
Office of Power Technologies
Renewable Energy and Energy Efficiency
US Department of Energy
Washington, D.C.

Re: CSP Peer Review

Dear Tex:

The letter is designed to provide an overview of the CSP Peer Review Panel's approach, findings, and recommendations following the 3-day meeting held in Albuquerque on November 7-9, 2001. In addition to this short summary letter we have attached final version of our report, which is in the form of a two per page set of 70+ powerpoint slides. Although the essential content of this information was presented to you at the debrief on Friday afternoon, November 9th in Albuquerque, there has been some minor editing and rearranging of the material contained in the attachment.

First of all, the panel appreciated the care and organization that went into the presentations made at the meeting. In the two full days of briefings we were exposed to both the breadth and depth of the CSP programs in sufficient detail to allow us to provide an informed evaluation.

After much discussion among panel members we decided on the following approach for our review. As you know, we were asked to evaluate the overall CSP program and to examine five specific components:

1. Program Management
2. Distributed Power Systems
3. Dispatchable Power Systems
4. Advanced Components and Systems
5. Test and Research Facilities

In each case, we have provided you with a detailed set of findings and specific recommendations, which are documented in the attachment.

Overall, the Panel felt that the CSP program was addressing important issues needed to meet US deployment goals for renewable energy technologies. In general, the quality of the technology being developed both within the DOE SunLab system at NREL and SNL and with its industry partners is very good. Although the Panel chose not to use a numerical ranking of each program element, they all would fall into the excellent to good category, particularly given their reduced levels of support.

With proper funding the DOE CSP program can play an important role in catalyzing further CSP technology advances, which will further improve CSP economics and market penetration. Ultimately, CSP technologies could contribute significantly to the US supply of electricity from domestic resources. In the short term, CSP could make a difference for the US by adding diversity and security to our energy supplies, particularly in the high-grade areas of the Southwest.

It is the Panel's view that all current DOE-supported R&D being conducted on the CSP technologies -- including dishes, power towers, troughs, concentrating photovoltaics (CPV) and other advanced receiver, heat transfer, and storage components -- are of high quality and deserve continued support as they address a complementary set of applications for both dispatchable and distributed power over a range of scales. In addition, the SunLab's facilities at SNL and NREL represent an important national asset both for critical testing, standardization, and performance verification as well as advanced R&D that need to be sustained and upgraded in the years ahead.

The panel noted that support for the CSP program is significantly below the level needed to contribute to the goals and objectives of the National Energy Policy. Many Panel members believe the program is underfunded by about a factor of 2 to 4 times.

Given the substantial decreases that have occurred in the program's budget over the past decade, the Panel felt that the program management has already responded with considerable restructuring to remove any unessential components, including, of necessity, a number of promising activities. Therefore, we did not feel that major changes in current priorities or further specific cuts or deletions of projects are needed at this time. Nonetheless, as you will see in the attachment, we have not hesitated to make substantive recommendations for the program in general as well as for each of the five elements you asked us to examine.

In view of new DOE priorities articulated recently by Secretary Abraham, we would be happy to provide our perspectives on how CSP technologies might contribute to increasing America's energy security as well as to address goals associated with the President's climate change initiative.

We appreciate the opportunity to comment on this important DOE program and look forward to receiving feedback. As we mentioned in Albuquerque, the Panel chair and other members are available for further discussions of our review with Assistant Secretary Garman, Bob Dixon, Jim Rannels, and other Federal officials who may wish to be directly briefed on the Panel's findings and recommendations.

Sincerely,

Jefferson W. Tester, Chair
on behalf of CSP Peer Review Panel 2001
Herbert Hayden
Glenn Hamer
Rose McKinney-James
William Peters
William Stine

Cc with attachment.
Robert Dixon
Jim Rannels