



# The Energy SuperGrid

[SG Home](#)[The Vision](#)[Tech Stuff](#)[SuperGrid 2](#)[Press Coverage](#)[Bibliography](#)

*A Symbiosis of*

*Nuclear/Hydrogen/Superconductivity/Solar/Biomass  
Technologies supplying Carbon-free, Non-Intrusive  
Green Energy  
for all Inhabitants of Planet Earth*

[Chauncey Starr](#)[Paul Grant](#)[Jesse Ausubel](#)[Tom Overbye](#)[Contact Me](#)

## SuperGrid 2 Proceedings

Sponsored by the [Lounsbery Foundation](#) & [EPRI](#)

25 - 27 October 2004

University of Illinois, Urbana - Champaign

[View the Chauncey Starr Video Introduction](#)

[UIUC SuperGrid 2 Website](#)

*[Go Directly to Proceedings](#)*

## Prologue

In late 2002, under a grant from the Lounsbery Foundation, the Electrical Engineering Department of the University of Illinois organized a conference in Palo Alto to examine the viability of the SuperGrid concept. This workshop, SuperGrid 1, concluded there were no fundamental technical barriers to achieving the vision. Its report is in the [Appendices](#) below and can also be found at the [UIUC SuperGrid Website](#) and on the [SuperGrid Pages](#) of [Paul Grant's Website](#). The latter site contains additional extensive background and historical material on the technologies underlying

the vision. One of the recommendations of SuperGrid 1 was to hold a follow-on workshop that would examine in some detail those issues, both technical and societal, that would require further attention and provide a program agenda to be undertaken by academic, governmental and industrial entities. These present Proceedings contain the preliminary and "unfiltered" findings of SuperGrid 2 which was held under the co-sponsorship of the Lounsbery Foundation and EPRI.

## Organization

We will follow roughly the chronological order of the presentations as found in the Workshop Agenda, except we will insert after each plenary talk those comments fed back by the relevant "break-out" sessions so that the reader can easily associate the two temporally separate and sometimes parallel events. This document should be read with a browser compatible with Microsoft Internet Explorer 6.0 containing an Adobe Acrobat Reader 6.0 or higher plug-in. All presentations and feedback media have been translated to PDF format. Some detail will be lost from PowerPoint files that contain extensive animation. The individual authors should be contacted to obtain these source documents. To view the video interview with Chauncey Starr, the browser should have Windows Media Player 9.0 or its equivalent plug-in available. Each link will open in a separate window to ease comparative viewing. Each PDF document can be printed, including the [PDF version](#) of what you're reading now.

---

## Proceedings

### Quick Links

|                                |                              |                                  |  |
|--------------------------------|------------------------------|----------------------------------|--|
| <a href="#">Public Lecture</a> | <a href="#">Introduction</a> | <a href="#">Technical Topics</a> | <a href="#">Close &amp; Appendices</a> |
|--------------------------------|------------------------------|----------------------------------|--|

Public Lecture

[Big Ways to Decarbonize the Energy System](#)

Jesse Ausubel, Rockefeller University

Introduction

[Welcome and Agenda](#)

Tom Overbye, UIUC

SuperGrid Vision

[Chauncey Starr, EPRI \(video interview by Paul Grant\)](#)

[Back to Top](#)

Technical Topics (Quick Links)

|                            |                               |  |                              |
|----------------------------|-------------------------------|--|------------------------------|
| <a href="#">SuperCable</a> | <a href="#">Power Control</a> | <a href="#">Power System Integration</a> | <a href="#">Hydrogen</a>     |
| <a href="#">Nuclear</a>    | <a href="#">Underground</a>   | <a href="#">Environment</a>              | <a href="#">Construction</a> |

[Back to Quick Links](#)

[Back to Top](#)

|   |  |
|---|--|
| <p><a href="#">SuperCable</a><br/>                 Paul Grant, W2AGZ Technologies,<br/>                 EPRI Science Fellow (retired)<br/>                 Panel Feedback</p> <ul style="list-style-type: none"> <li>• <a href="#">Grant - Outreach</a></li> <li>• <a href="#">McCarthy - LIPA Cable</a></li> </ul> | <p><a href="#">Power Control</a><br/>                 Bob Lasseter, U Wisconsin-Madison<br/>                 Panel Feedback</p> <ul style="list-style-type: none"> <li>• <a href="#">Issues and Challenges</a></li> <li>• <a href="#">The Way Forward</a></li> </ul> |
| <p><a href="#">Power System Integration</a></p>   | <p><a href="#">Hydrogen</a></p>  |

|   |  |
|---|--|
| Bob Thomas, Cornell<br>Panel Feedback<br><ul style="list-style-type: none"> <li>• <a href="#">Issues and Challenges</a></li> <li>• <a href="#">The Way Forward</a></li> </ul>   | Robert Schainker, EPRI<br>Panel Feedback<br><ul style="list-style-type: none"> <li>• <a href="#">Hydrogen SG Agenda</a></li> <li>• <a href="#">Hydrogen SG Projects</a></li> </ul>   |
| <u><a href="#">Nuclear</a></u><br>Wes Myers, LANL<br>Panel Feedback<br><ul style="list-style-type: none"> <li>• <a href="#">Nuclear Breakout Group</a></li> <li>• <a href="#">INEEL Program</a></li> </ul>                    | <u><a href="#">Underground Construction/Tunneling</a></u><br>Ed Cording, UIUC<br>Panel Feedback<br><ul style="list-style-type: none"> <li>• <a href="#">Present Technology and Industry Status</a></li> <li>• <a href="#">The Way Forward</a></li> </ul> |
| <u><a href="#">Environmental Engineering</a></u><br>Wayland Eheart, UIUC<br>Panel Feedback<br><ul style="list-style-type: none"> <li>• <a href="#">Research Needs</a></li> <li>• <a href="#">Summary Statement</a></li> </ul> | <u><a href="#">SuperGrid Construction Challenges</a></u><br>Craig Smith, DMJM  |

[Back to Technical Topics](#)

[Back to Quick Links](#)

[Back to Top](#)

### Close & Appendices

| Closing Remarks   | Appendices   |
|---|--|
| <a href="#">Wishes and Actions</a><br>Jesse Ausubel, Rockefeller University | A. <a href="#">Attendee List</a><br>B. <a href="#">Steve Eckroad's Minutes</a> |

- C. [Script of Jesse's Public Lecture](#)
- D. [US Energy Overview 1949 - 2003](#)
- E. [Paul's Potential Project Picks](#)
- F. PDF of This Document
- G. [SuperGrid 1 Report](#)

[Back to Technical Topics](#)

[Back to Quick Links](#)

[Back to Top](#)



[Home](#)

[Front Page](#)

