OFFICE OF POWER TECHNOLOGIES

Success Stories

The Sun's Joules CD-ROM and the School Energy Doctor

New software teaches high-school students about renewable energy and energy efficiency

The Office of Power Technologies is part of the Office of Energy Efficiency and Renewable Energy

The Sun's Joules is a CD-ROM that mixes interactive exercises, videos, photographs, and text to provide a comprehensive encyclopedia on renewable energy. Filled with useful information about renewable energy technologies and issues, The Sun's Joules includes sections on biomass, geothermal energy, photovoltaics, solar thermal energy, wind power, hydropower, passive solar buildings, transportation, economics, and the environment.

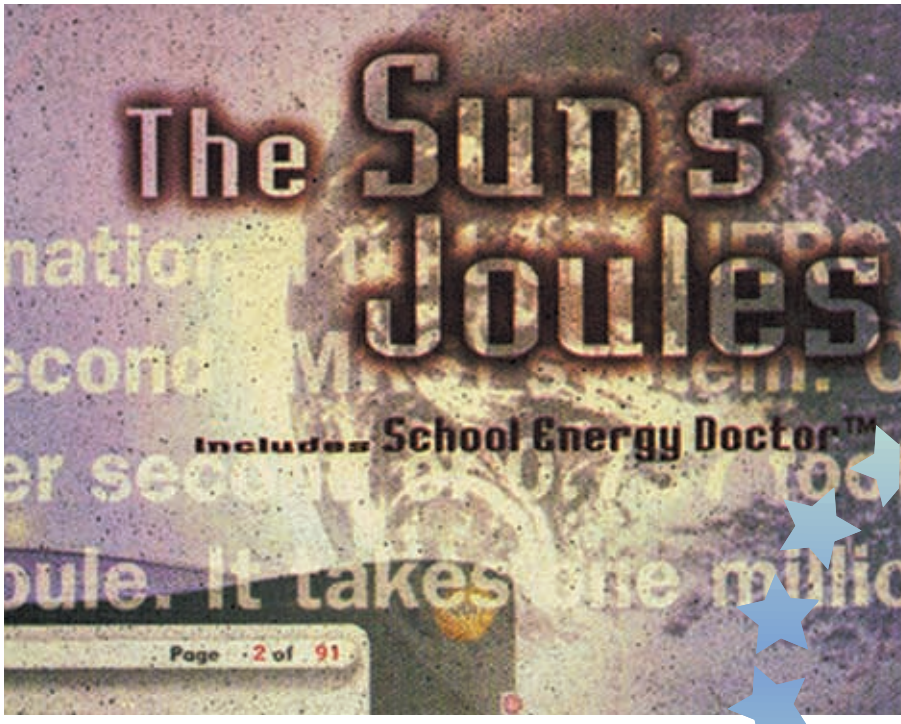
The CD-ROM was created by the Center for Renewable Energy and Sustainable Technology (CREST), with funding from the U.S. Department of Energy (DOE) and technical support from the National Renewable Energy Laboratory. The Sun's Joules contains roughly 1000 pages of images and text, 60 video clips, 10 interactive exercises, state-by-state profiles of U.S. energy use, a glossary of renewable energy terms, and an index. The CD-ROM was originally created for high-school audiences, but has been used at the middle-school level and as a reference tool for the general public.

Also incorporated onto the CD-ROM is the School Energy Doctor, a spreadsheet-driven program that guides students through an energy audit of their schools. The program analyzes the energy savings available through various energy efficiency technologies, and performs an analysis of both the economic and environmental benefits of retrofitting the schools to the more efficient technologies.

DOE also worked with the U.S. Department of Education (DOEd) to produce a Teacher's

Highlights

- *Detailed, comprehensive information about renewable energy and energy efficiency will help high-school students learn about this technology.*
- *Comprehensive Teacher's Guide will help teachers implement The Sun's Joules' concepts in classrooms.*
- *Nearly 8000 copies were given to high schools to support the 1997-1998 National High School Debates on renewable energy.*



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The guide also provides teachers with a sense of the process involved in linking national standards, instruction, and assessment into an integrated instructional unit.

Guide that will help teachers apply The Sun's Joules' concepts in their classrooms. Produced by DOEd's Mid-continent Regional Educational Laboratory (McREL), the guide provides background information, instructional tips, and lesson strategies. The guide also provides teachers with a sense of the process involved in linking national standards, instruction, and assessment into an integrated instructional unit.

The Sun's Joules CD-ROM and the Teacher's Guide have been licensed to The Learning Team, a nonprofit educational software company, and are now commercially available. In addition, DOE provided nearly 8000 free copies of the CD-ROM to high schools in support of the 1997–1998 National High School Debates, for which the topic was renewable energy.

Project Partners

U.S. Department of Energy

National Renewable Energy Laboratory

Center for Renewable Energy and Sustainable Technology

Media Culture

Mid-continent Regional Educational Laboratory

The Learning Team

For More Information:

DOE's Office of Power Technologies
Web site at:
http://www.eren.doe.gov/power/

or contact:
Energy Efficiency and Renewable Energy Clearinghouse (EREC)
P.O. Box 3048
Merrifield, VA 22116
(800)-DOE-EREC
www.eren.doe.gov/consumerinfo/
email: doe.erec@nciinc.com

To view a demo of The Sun's Joules, visit CREST's Web site at:
soltice.crest.org/renewables/SJ/info.html

McREL's Web site is located at:
http://www.mcrel.org/

To order The Sun's Joules, see the Learning Team Web site at:
http://www.learningteam.org

or contact them at:

The Learning Team
84 Business Park Drive
Armonk, NY 10504
(800)-793-TEAM

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1000 Independence Avenue, SW
Washington, DC 20585

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