Need for Renewable Energy Education

A sustainable future requires an investment of knowledge and skills in the people who will shape that future. The renewable energies of sun, wind and water are clean and abundant, yet underutilized resources. Renewable energy technologies are... in their use. Decision-makers need information to make appropriate choices with confidence. Technicians need skills and experience to service the technologies. End-users must learn how to operate and maintain self-reliant renewable energy systems.

Thank You to Our Supporters!

Solar Energy International is a non-profit educational organization and an Equal Opportunity Institution and Employer. SEI is not affiliated with any manufacturer, dealer, distributor, or any other renewable energy commercial enterprise.
SEI's Renewable Energy Education Program (REEP) teaches the practical use of solar, wind and water power. Our workshops give individuals the knowledge and skills to design, install and maintain renewable energy systems and to build state-of-the-art solar homes that are efficient, practical and earth-friendly.

2005 REEP Workshops

- Advanced Photovoltaics
- Biodiesel Fuel
- Carpenter Skills for Women
- Designing & Building Natural Homes
- Homestead Wind Generators
- Introduction to Renewable Energy
- Intro to Straw Bale Construction
- Micro-Hydro Power
- PV Design & Installation
- PV Design Online
- PV Industry Week
- RE for the Developing World
- RE for the Developing World - Hands-On
- Solar & Radiant Heating Systems
- Solar Home Principles
- Solar Home Design Online
- Solar Hot Water
- Solar Water Pumping
- Successful Solar Businesses
- Utility Interactive PV Systems
- Women's PV Design & Installation

REEP Projects: SEI’s Hands-on, How-to Experiences

Alumni of SEI’s 2005 REEP Program gained hands-on, how-to experience on a total of 15 installations. REEP projects represent practical applications of the latest commercial technologies and products. Each installation remains an operational system, providing clean renewable energy for businesses, institutions, ranches, homes and communities. Future participants will visit and learn from these projects before meeting their own installation challenges.

Guest Instructors & Industry Representatives

SEI instructors are leaders in their fields, bringing the most up-to-date information in renewable energy technologies. In 2005, over 100 guest instructors and industry representatives presented in our workshops.

Workshops Were Offered in 16 Locations

- Austin, Texas
- Carbondale, Colorado
- Costa Rica
- Grass Valley, California
- Honolulu, Hawaii
- Lincroft, New Jersey
- Nicaragua
- Olivebridge, New York
- Paonia, Colorado
- Portland, Oregon
- Reno, Nevada
- Salem, Oregon
- Salt Lake City, Utah
- San Diego, California
- San Francisco, California
- San Juan Islands, Washington

“The extraction, conversion, and utilization of energy is the single largest component of air and water pollution, as well as emissions causing the change of our global climate.” —Christine A. Ervin, Assistant Secretary, Energy Efficiency and Renewable Energy, DOE, 1997

“I’d put my money on the sun and solar energy. What a source of power! I hope we don’t have to wait till oil and coal run out before we tackle that.” —Thomas Alva Edison
**SEI 2005 Charitable Programs**

SEI provided training & technical assistance to groups worldwide!

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**Scholarship Program**

Traveling to the United States has become increasingly hard for our international students, due to visa requirements and the cost of airfare. We try to offset these costs to eligible developing country residents by offering tuition scholarships.

**Scholarship Recipients**

In 2005 SEI offered 31 full and partial scholarships. Scholarship recipients included:

- A professor from the University of Guyana, South America who is now teaching his students about renewable energy technologies.
- Local high school students and a teacher to attend our biodiesel workshop. They have since established a biodiesel program at their school.
- Two local students, a rancher and a carpenter who are pursuing their own solar installation business.

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**INVEST Program**

INVEST volunteers work with communities worldwide and technically assist people to install solar, wind and water systems, building energy efficient, renewable energy homes and businesses.

INVEST volunteer, Andrew Pascale, with Thai solar technicians in 2005. INVEST volunteers traveled to Thailand, the Philippines, Nicaragua, and Costa Rica.

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The generous scholarship I was offered exposed me to the world of solar, technical assistance, technology in water pumping with DC pumps, and shaped me to a sustainable future as a technician of Renewable Energy. — Maina Stanley Gathai, Electrician at the Jane Goodall Chimp Sanctuary, Kenya

**2005 Projects**

SEI partnered with the Crested Butte Community School and the Crested Butte Office for Resource Efficiency for a week of K-12 renewable energy education, a teacher training, and the completion of a student installed 1.55 kW Photovoltaic system. The project culminated with a Solar Fair for the entire Crested Butte community.

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**SEI’s Solar In the Schools Program (SIS)** targets grades K-12 and focuses on experiential learning of energy concepts and issues. The goal is to have students understand energy as it relates to all living things on the planet. SIS emphasizes critical thinking skills by exploring energy choices, costs, and solutions within individual communities. In 2005, SEI presented in many different classrooms throughout Colorado teaching over 800 students about renewable energy.

**2005 Projects**

SEI’s Solar in the Schools program presented in 13 schools throughout Colorado, and taught 891 students with hands-on projects including making biodiesel, constructing solar ovens, and implementing renewable energy curriculum in their classrooms.

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**Native American Program**

SEI works with Native Americans to help them satisfy their energy and housing needs with renewable energy and natural building. SEI works with Native American NGOs and non-profit organizations and has trained people from the Western Shoshone, Lakota Sioux, Yurok, Zuni, Hopi, and Chippewa Nations.

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A Look at 2005 in Photos!

- Participants in the Home Built Wind Generator workshop in Costa Rica with the wind generator they built.
- Hawaii PV Design & Installation workshop participants show off their PV installation.
- Micro-hydro workshop participants check the head and flow of a river.
- SEI workshop participants install a PV system in San Francisco.
- A young girl checks out a solar panel at the Crested Butte Solar Fair courtesy of SEI’s Solar in the Schools Program.
- SEI’s “Grease Queen” shows high school students the biodiesel processor.
- SEI Invest volunteer Andrew Pascale teaches a solar electric class in Thailand.
- Building a solar electric system as part of SEI’s Solar in the Schools program.
- Plastering a straw bale house on the Pine Ridge Indian reservation.
- School children help install a solar electric system.
- Building a straw bale shed in the Intro to Straw Bale workshop.
- Micro-hydro workshop participants check the head and flow of a river.
- Building a solar battery charger in Nicaragua in the RE for Developing World workshop.
- Participants in the Home Built Wind Generator workshop in Costa Rica with the wind generator they built.