An abundant supply of clean energy is critical for the health and well-being of any nation and its citizens. Clean energy provides opportunities and drives economic growth and prosperity. In order to build and maintain clean energy infrastructure, a nation must ensure that its workforce possesses the skills and techniques necessary to design, install and maintain clean energy systems and the ability to transfer those skills to future generations as time passes and technology progresses.

Too many investments in clean energy systems fail due to lack of knowledge, training and industry connections to understand the requirements for the installation, operations and maintenance of these systems.

The Vocational Training and Education for Clean Energy (VOCTEC) initiative addresses these global challenges by providing clean energy training and educational programs worldwide.

VOCTEC, under the leadership of Arizona State University, is a consortium of renowned educational institutions and service providers in the field of solar, wind, micro-hydro and hybrid energy technologies.

VOCTEC’s international clean energy services portfolio encompasses:

- Specialized policy workshops for government officials and decision makers
- Customized “train-the-trainer” courses and curricula for instructors and faculty from local educational institutions
- Vocational and hands-on technical trainings for the local workforce, such as technicians, installers and operators of clean energy systems

VOCTEC Sponsors:

http://voctec.asu.edu  |  voctec@asu.edu

Arizona State University
Vocational Training & Education for Clean Energy
Mesa, AZ 85212 | USA
Phone: +1 480 727-1312

Providing Education and Training in Clean Energy Technologies
Renewable energy generation can help countries meet the energy needs of their population while minimizing greenhouse gas emissions. VOCTEC, under the leadership of Arizona State University, is assisting developing nations in building local capacity to ensure the sustainability of their renewable energy investments.
SUPPORTING
GLOBAL RENEWABLE ENERGY ACCESS

The VOCTEC Team
Arizona State University (ASU) leads VOCTEC, a consortium of higher education institutions and service providers seeking to develop and implement clean energy training and education programs worldwide. The VOCTEC team is composed of ASU, Appalachian State University and Green Empowerment, a nonprofit organization. Team members include internationally recognized experts in the fields of clean energy technology, operations and policy implementation, educational assessment and design, and gender-conscious programming.

VOCTEC can help organizations meet energy, education, and workforce development goals and provide customized and localized training services in the areas below. VOCTEC Programs go beyond the training curriculum by embedding cultural, analytical and technological tools such as:

- Social awareness and gender inclusion to achieve maximum impact and participation among women and disadvantaged groups
- Dedicated performance measurement tools and methodologies to assess and evaluate the outcome and impact of training initiatives
- Online and computer-based learning support tools to promote best practices and analysis of outcomes and experiences.

Workforce Development
VOCTEC training programs provide a very hands-on, practical and applied technical learning experience. Students obtain a practical understanding of renewable energy (RE) technologies and are able to safely and efficiently install, operate, maintain and troubleshoot RE systems.

Coursework involves both classroom and hands-on training, to give students familiarity with real-world systems and applications. The length of training programs typically varies from 2-5 days for short on-site training modules and up to several weeks for intensive vocational training programs in specialized training centers.

Institutional Capacity Building
VOCTEC “train-the-trainer” programs incorporate comprehensive educational elements on clean energy technologies including how to train local technicians and operators for the sustainable installation, operation and maintenance of RE systems.

Classroom sessions are supplemented with extensive hands-on training activities and applied technical learning experiences. In addition, the in-depth training includes economic, societal, pedagogical and communications skills. Depending on local needs, the length of these programs varies from 2 - 3 weeks. Each is conducted in close cooperation with local institutions.

Empowering Policy Makers
VOCTEC provides training to policy makers and government officials contemplating investments in clean energy technologies.

These 1-2 day workshops utilize an interactive format to review key factors influencing successful deployment of renewable energy systems. Such factors include: budgetary and financial implications; technical and natural resource requirements; environmental impacts; human and institutional capacity; and best practices for design, implementation and operations of clean energy systems.

HIGHLIGHTED PROJECTS

Solar PV Training in the Pacific Islands
In 2013, VOCTEC began building regional capacity of qualified technical trainers and technicians to install, operate, maintain and troubleshoot off-grid solar PV systems in the Pacific Islands. This program continued through 2014 with both educator and technician training events in islands throughout the Pacific.

Micro-Hydro Technician Training in Liberia
VOCTEC conducted a nine day micro-hydro technician training in Yandohun, Liberia in January 2014. Twenty participants representing government, industry, universities and the private sector completed the training in the fundamentals of operating and maintaining micro-hydro plants.

Wind Policy Workshop in the Pacific
In partnership with IUCN Oceania, VOCTEC conducted a workshop to train energy project managers and policy makers from several Pacific Island Countries. The two day workshop in April 2014 enabled participants to determine the feasibility of producing wind energy.

Solar PV Certification Program in West Africa
IRENA and VOCTEC have teamed up to promote and initiate the implementation of harmonized certification programs of technicians for off-grid, as well as grid-connected solar photovoltaic (PV) energy systems.