



Clean Energy

Overview

Winrock Services

Concept & Program Design: Resource assessments, feasibility studies, financial analysis, engineering design and bid documents for construction for hydro, wind, solar, biomass, and biogas technologies and applications.

Project Management & Implementation: Technical assistance and performance-driven management support for energy project design and implementation, ensuring compliance with funder and country requirements.

Gender Integration & Social Inclusion: Gender and social inclusion analyses and integrated project activities; awareness-raising activities that integrate social concerns; design and implementation of participatory monitoring and evaluation (M&E) systems with data disaggregated by gender and social groupings; mainstreaming of concerns in policies and laws; sensitization training; and capacity building.

Grant Management: Design and management of grant programs, including results-oriented solicitations, transparent review and selection processes, financial training for grantees, and M&E.

Public-Private Partnership Development: Mutually beneficial partnerships designed with the private

sector to leverage resources to achieve development objectives, including through USAID's Global Development Alliance, corporate social responsibility programs and other mechanisms.

Training & Institutional Capacity Building: Build and transfer capacity through organizational capacity and human resource development assessments and capacity building plans; design and delivery of training programs and volunteer technical exchange programs.

Impact Assessments: Monitor and evaluate program performance and impacts (including social and environmental impact assessments), management and compliance.



Scaling Up Clean Energy for Economic & Social Development

Energy is an essential element when addressing complex global challenges, providing a foundation to alleviate poverty, raise living standards, empower disadvantaged groups, and increase productivity.

Winrock International's programs expand access to clean, modern energy for all, with sustainable, market-driven approaches that promote economic development, energy security and reduction of greenhouse gas emissions and other pollutants, improving the health and the environment of beneficiaries around the world.

Winrock supports the technical, policy and investment building blocks necessary for scaling up clean



energy, energy efficiency and low emission development planning — building local capacity for communities, national and local government, local NGOs, educational institutions, financial institutions, and private sector companies. Clean

energy solutions are tailored to meet the specific needs of the communities where we work, including on-grid generation and off-grid/mini-grid systems using a range of renewable energy (RE) technologies.

Over the past 20 years Winrock has supported energy activities and programs in Afghanistan, Bangladesh, Benin, Bhutan, Brazil, Chad, China, El Salvador, Georgia, Guatemala, Haiti, Honduras, India, Indonesia, Kenya, Laos, Macedonia, Mexico, Nepal, Nicaragua, Pakistan, Peru, Philippines, Rwanda, South Africa, Uganda, Vietnam and the U.S.

Energy Practice Areas

Energy Access: Mobilizing communities and businesses for off-grid and mini-grid energy systems using RE technologies and applications, for lighting, water pumping, chilling, telecommunications, security, and agriculture and commercial applications. *Winrock electrified 22,000 rural households and over 350 schools using solar, micro-hydro in the Philippines, and supported the installation of 1,500 PV systems in Afghanistan for community street lighting, hot water and refrigeration for clinics, lighting for schools, and water pumping stations.*

Productive Applications: Linking RE technologies with agricultural and commercial applications and social infrastructure such as schools and clinics, to improve livelihoods. *In Kenya, Winrock is increasing awareness of the benefits of solar water pumps (SWPs), and helping to accelerate commercial sales of these pumps to small farmers. Also in Kenya, Winrock is working with a U.S. company to introduce solar chillers to small dairy farmers to help*

Winrock International is a nonprofit organization that works with people in the United States and around the world to empower the disadvantaged, increase economic opportunity, and sustain natural resources.



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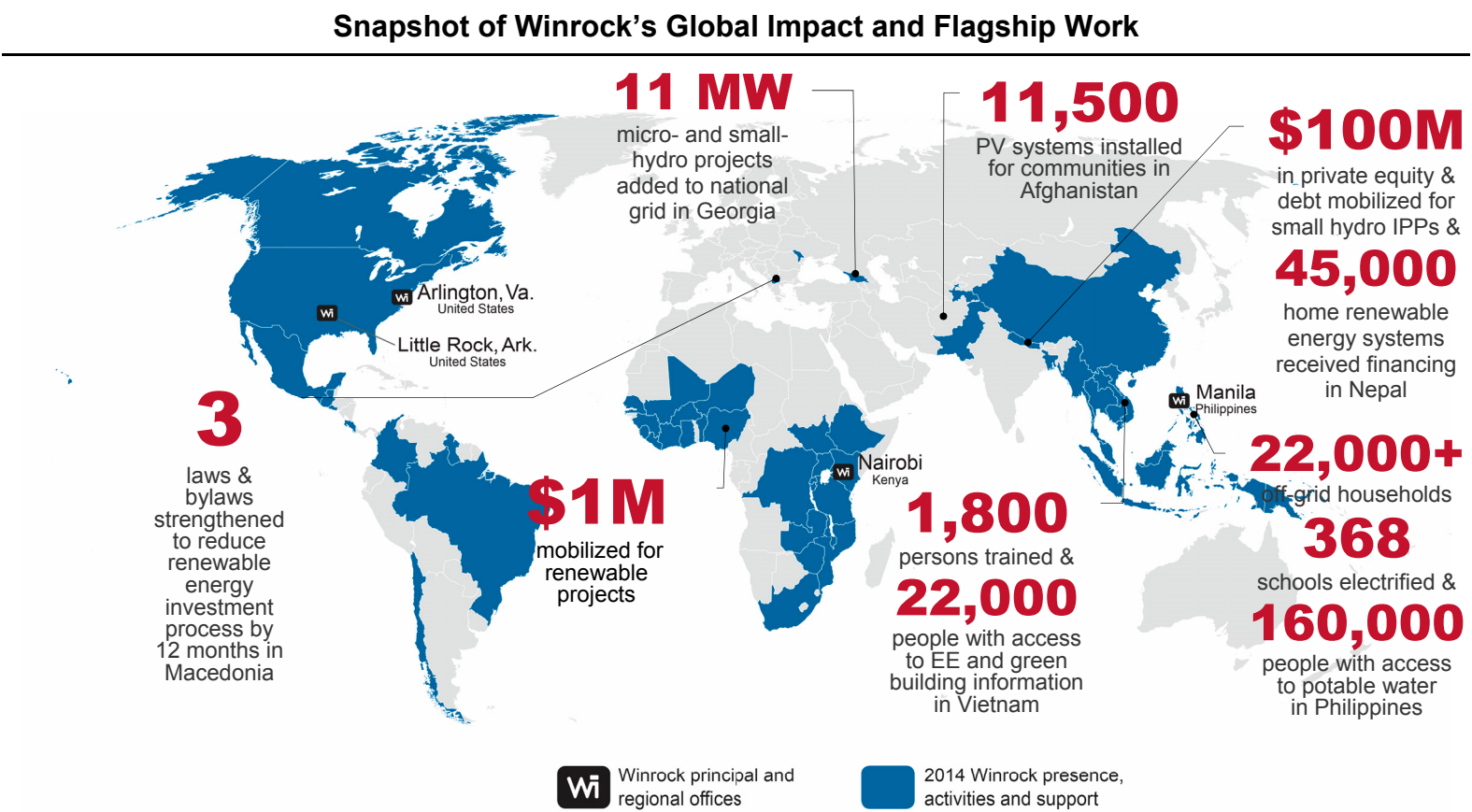
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Winrock is preparing a Mini-grid Toolkit to enable policymakers, USAID officers and developers to understand the policy, technology, financing and governance frameworks most suitable for the expansion of investments into mini-grids for energy access.

them improve the quality of their milk and increase production for retail.

Bioenergy: Supporting innovation and sustainability research and standards; scaling up use of modern bioenergy services, including the design and launch of domestic biogas programs; identifying policy and market options; and facilitating knowledge transfer. *In Indonesia, Winrock is helping palm oil mills reduce emissions and improve sustainability by preparing sustainability assessments and biogas pre-feasibility assessments, leading to new biogas projects now in the bidding, commissioning and construction stages.*

Grid-Connected Renewables: Assisting governments and utilities to develop Feed in Tariff and auc-



tions and streamlined procedures to attract investors, and building capacity of private sector developers to overcome sectoral barriers, develop bankable feasibility studies and to achieve financial closure. *Winrock played a key role in opening up the sugar cane co-generation sector in India and enabled the establishment of a dynamic hydropower independent power producer (IPP) sector in Nepal. In Macedonia, Winrock has worked with the Ministry of Economy to substantially reduce the approval process for IPPs.*

Clean Energy Finance: Developing clean energy project pipelines and investment strategies using debt/equity financing, DCA and micro finance mod-

Winrock supported private sector investment in sugarcane, rice and wood residue energy systems, resulting in the development of 300 MW of grid-connected generation and improved policies and laws favorable to private power and/or biomass energy in Costa Rica, Guatemala, El Salvador and India.

els; building developer-financial institutional partnerships; assisting developers in preparing bankable documents and educating lending institutions about risk mitigation; and strengthening ability to access carbon financing. *In Nigeria, Winrock is working with financial institutions, including the Central Bank of Nigeria, Ecobank, and Sanbic Banks, to increase technical capacity and greatly expand pipelines of bankable projects for RE and EE lending. Winrock will oversee the disbursement of \$10 million for RE projects in Nigeria, and, to date, has helped mobilize nearly \$1 million for SMEs.*

Winrock mobilized financing from commercial banks and micro-finance institutions for more than 45,000 energy systems including solar home systems, biogas digesters, and improved cookstoves. Winrock brought together private investors to create the Clean Energy Development Bank, which has become a leader in investing in hydropower IPPs and other renewables in Nepal.

Energy Policy Reform: Advisory services for policymakers on RE and energy efficiency legislative and regulatory issues; comprehensive reviews of energy programs and institutional needs; and energy planning strategies. *In Macedonia, Winrock produced a policy review and roadmap with recommendations to change the country's legal framework, resulting in amendments to laws that reduced the RE project investment process by as much as 12 months.*

Low Emission Development Strategy (LEDS) Planning: Technical and advisory assistance to national and municipal-level energy planning; data collection, analysis and management of emissions databases and inventories; policy reforms to lower GHG emissions, encourage economic growth and strengthen pre-conditions for attracting private investment in clean energy; green buildings; and capacity building and public outreach programs to increase awareness and interest in LEDS, clean energy and energy efficiency. *In Georgia, Winrock is advising 10 municipalities on sustainable energy planning and building the capacity of government to design and implement a national LEDS, helping the country reduce GHG emissions, secure energy savings and facilitate private sector investment in clean energy.*

Household Energy: Integrating health and energy interventions to address energy needs and reduce household air pollution and associated health risks, through advancing stove technology design and performance; supporting global standards; developing sustainable markets for clean technologies and fuels, including financing for users and distributors; and promoting consistent, correct use of clean technologies and fuels. *In Nepal, Winrock installed over 15,000 improved cookstoves and more than 12,000 biogas systems.*

Energy Efficiency: Helping governments and communities with planning, policy and data management to reduce energy use and costs; preparing building-sector energy audits; conducting training and knowledge dissemination; and designing and implementing demonstration projects, including weatherization and efficient heating and cooling. *In Vietnam and Georgia, Winrock is building capacity in energy data collection, management, energy simulation, and analysis for policymaking in the building sector.*