

Promoting Renewable Sources of Energy

Renewable Energy Use in Remote Areas of Australia

Description of Initiative

Australia's geography creates challenges to the supply of electricity, particularly in remote areas beyond the electricity grid. Australians living and working in remote areas have often had to make do with variable and often intermittent power sources, affecting their business, their comfort and their health.

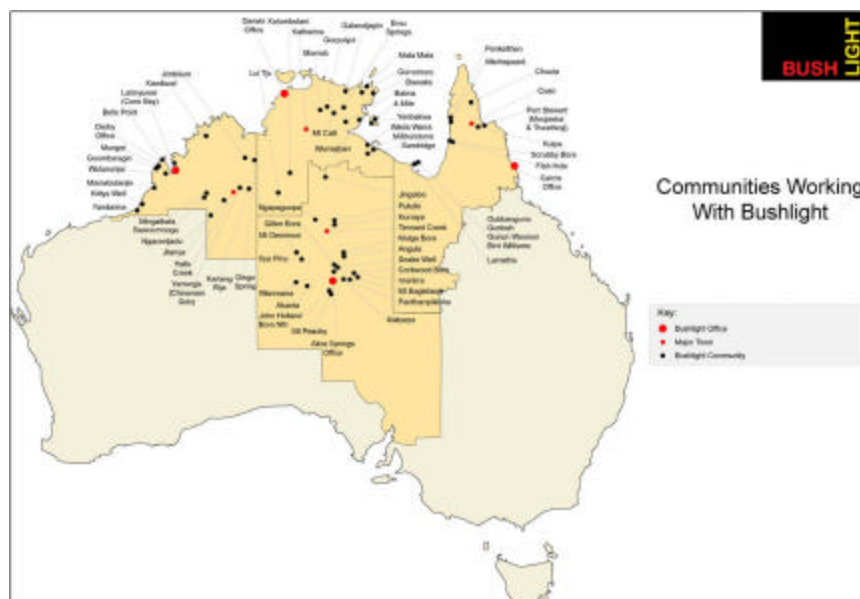
Renewable electrification technologies in remote areas encounter additional barriers to conventional energy supply options. These barriers can include a lack of knowledge and awareness of renewable energy technology; a scarcity of adequately trained personnel to install equipment and maintain infrastructure; cost and difficulty of travel to remote locations for installation and maintenance; and high capital costs for renewable energy systems. Notwithstanding this, renewable energy is often a viable means of reducing reliance on diesel-generated electricity in those areas of Australia not serviced by a main electricity grid.

The Renewable Remote Power Generation Program (RRPGP), launched in 1999 by the Australian Government, aims to increase the uptake of renewable energy technology in remote areas of Australia by providing rebates of up to 50% of the capital cost of renewable energy equipment to reduce diesel use in remote area power supplies. Up to \$205 million will be available over the life of the RRPGP. Program funds are made available to participating States and Territories and are allocated on the basis of the relevant diesel fuel excise paid in each State or Territory by public generators. Annual savings of at least 50 million litres of diesel fuel are expected.

The Indigenous Renewable Energy Services Programme - Bushlight

Bushlight is a project funded under the RRPGP, it aims to ensure the supply of reliable renewable energy systems tested to appropriate standards; improve community confidence with renewable energy systems; and contribute to the development of an integrated energy service network. Since being launched in May 2002, more than 450 remote indigenous communities have been visited by Bushlight staff to discuss energy services and over 60 Bushlight renewable energy systems have been installed (see figure 1).

Figure 1. Bushlight communities are located in some of the most remote and inaccessible areas of Australia



Bushlight operates in Western Australia, the Northern Territory, Queensland and South Australia and was developed in response to a 1999 study by the Australian Cooperative Research Centre for Renewable Energy and the Centre for Appropriate Technology which found that most of Australia's 1,200 small remote indigenous communities depended on diesel or small petrol generators to meet day to day energy requirements. Some communities incorporated renewable generation, but these systems were not always reliable or appropriate to the needs of the community, as they required maintenance that some communities were not able to provide or they were not designed for community energy demands.

Bushlight's goal is to improve livelihood opportunities in remote indigenous communities through the application of sustainable renewable energy services. Bushlight provides design, information and education services to help maintain renewable energy power systems and engage with energy service networks. Communities that understand their power system and know how to look after it develop a sense of ownership that has many benefits.

The Bushlight programme is implemented by field officers based in Alice Springs, Cairns, Darwin and Derby who provide technical and community support to remote communities. Bushlight's head office is located at the Centre for Appropriate Technology in Alice Springs, and it is managed by the Department of Family and Community Services. For more information on the Bushlight project visit <http://www.bushlight.org.au/>

Mainstreaming/Sustainability

The Renewable Remote Power Generation Programme has offered a creative solution to energy supplies in remote areas. With Australian Government funding of more than \$130 million provided to date, over 4,500 remote clean power generation projects have been implemented throughout regional areas of Australia.

Among the many beneficiaries are indigenous communities, pastoral properties, mining operations, tourism sites and individual households. The benefits include increased access to power, cleaner power generation and improvements in health and quality of life for people living and working in remote and regional parts of Australia.

Replicating the Initiative

The successful deployment of renewable energy technologies in remote locations is of relevance to many developing countries. Establishing appropriate standards, industry training and accreditation, and appropriate forms of community information and education are central to building a sustainable renewable energy industry able to meet the need of remote and remote indigenous communities.

The Australian renewable energy industry has developed significant expertise in the design and delivery of remote renewable energy power systems. International training programmes have been established based on course material established in Australia, and there is further scope for information exchange through Australia's involvement in International Energy Agency implementing agreements, the Renewable Energy and Energy Efficiency Partnership and other international energy forums.