



Gnylmarung

Setting the Scene

Gnylmarung is situated on the west coast of the Dampier Peninsula in the Kimberley region of Western Australia. The surrounding area consists of flat pindan soil with gum trees, wattles and widespread local bush grasses.

Alfonse and Delma Cox founded the homeland of Gnylmarung and chose its location in 1989. Ten acres of land was allotted for the community and Gnylmarung was established in 1991. Alfonse and Delma were both born in Beagle Bay, the nearest service centre to the community. The Cox family maintains strong networks with many homeland residents throughout the Dampier Peninsula. These connections give Gnylmarung a strong regional network that aids communication, access to funding programs and the support they need for community and economic development.

Background to the Community

The community of Gnylmarung had very humble beginnings. It has taken a great deal of time and energy for the community to become the comfortable place it is today. The first dwellings in Gnylmarung were three tin shelters erected in 1993. At this time there were no essential services connected to the homelands. As a result of the somewhat basic living

conditions, Gnylmarung was inhabited only sporadically between 1993 and 2002.

In 2002 Alfonse and Delma started living in the community on a permanent basis and began bringing it up to a more liveable standard. By this time some basic services to the community had been established but were still minimal. There was no reliable energy supply and little in the way of water infrastructure. At this time the three shelters had roofs but were not enclosed by walls, making it particularly challenging to stay in the community over the wet season.



The Bushlight solar array at Gnylmarung

Pre-Bushlight Energy Services

During 2003-04 a number of buildings and facilities were constructed in Gnylmarung, including a makeshift ablution block, a water tank and a generator shed. As residents were unable to get support in this process, proper reticulation was not an option and residents were forced to continue relying on the use of extension leads to power appliances in the shelters.

In 2005 the community was provided with underground reticulation to each of the shelters, and the following year residents happily moved into the first house built in the community. This development was the first instance of any major external support being offered to Gnylmarung; prior to this community members worked on improving their community using their own resources.

At this stage in the community's development, Gnylmarung was reliant on a small portable



Bushlight's David D'Antoine (right) talking to Delma & Alfonse Cox during a Community Energy Planning meeting in 2006

generator for power. The generator was using approximately 5200 litres of fuel per year, at a cost of up to \$9,500. In addition the ongoing yearly maintenance cost was around \$4,000 a year (it should be noted that these cost estimates are based on fuel prices in 2006).

In order to maintain the momentum of the new phase of development, residents began discussions with Bushlight in early 2006 to look at energy service options in the homeland.

Community Energy Planning and Aspirations

When community members first started living at Gnylmarung, their main intention was to simply live in their home country. Over the years their plans slowly developed to ensure a more sustainable future on their home country. By the time Bushlight first visited the community in 2006, the residents' vision was to develop livelihood opportunities through tourism so that residents could remain on their homeland and grow to a position of independence and prosperity in

the future. Residents had already built three tourism accommodation shelters and a tourism kitchen, with plans to rent these facilities to tour companies operating throughout the Dampier Peninsula. In addition a business relationship was established with Middle Lagoon Resort so that tours could be run through the community as well. Alfonse and Delma also planned to build a campsite and ablution block to further cater for campers travelling in the area, and to run daily fishing tours.

The community's Art and Craft Centre was already filled with gifts and artefacts to further boost their community income with sales to tourists. In addition, Delma maintained a small vegetable garden at the back of the main house. Given her success on the small scale, Delma planned to establish a large garden to supply fresh produce not only for community but to meet tourist demands.

System Specifications & Costs

The Bushlight renewable energy system was installed in 2007 and connected to the existing buildings and infrastructure in the community. It is a 48VDC system with a maximum AC load of 19.5kWh/day. The system is connected to 11 buildings in the community including the Bushlight shed. Data downloaded from the inverter shows that the system is running well and is meeting the energy needs of the community.

There was one problem with the Bushlight system recently involving a miscommunication between residents and Bushlight concerning energy budget allocations for each of the buildings. This led to the energy budgets being reduced too far and caused some confusion and irritation on the part of the community. This has since been rectified and should not happen again in the future.



The main house in Gnylmarung, built in 2006.

Development of Community Livelihoods

The community's tourist venture, in collaboration with Middle Lagoon Resort, has been established and their first tourist season has had promising results. Their aim now is to have a larger tourism capacity with additional shelters and a camping area which are already in the first stages of development, with

Bushlight's Community Energy Planning Model

Bushlight's objective is to improve livelihood choices for remote communities by increasing their access to reliable energy services. To do so, Bushlight works directly with community members to provide them with independent advice and information about choosing which energy services are best for them, and advice on demand side management, and energy conservation. Using a range of pictorial resources, Bushlight invites communities to consider how they use energy and how much it costs them; and looks at what options are available for improving their access to reliable energy services.

Through workshops and community mapping exercises, Bushlight works with residents to prepare Community Energy Plans (CEPs). These plans detail the community's current energy needs as well as any future livelihood aspirations. The CEP constitutes an agreement between Bushlight and the community by setting out household energy budgets and the roles and responsibilities of the community in using and looking after their solar power system. The responsibilities of Bushlight, the community's service agency, and the system installer are also laid out.

After the initial CEP meetings and completion of the system design, Bushlight coordinates the installation of the RE equipment. Following installation, Bushlight provides education and training in system operation and maintenance over several visits during the course of the first year. Bushlight's approach expands on the typical RE industry process by involving the community in all key activities and decisions.

new tourist shelters to be built soon. While the aspiration of establishing a fishing tour operation at Gnylmarung has not yet been realised, residents do provide an informal service to tourists interested in fishing, and their success to date is encouraging.

With the support of Djaringo Pty Ltd (www.nirrumbuk.org.au/djaringo.htm) a registered training organisation and the community development employment program (CDEP), Gnylmarung and neighbouring communities have been able to access training and further education opportunities. A Djaringo instructor lives semi-permanently at the community and his role is to instruct community members from Gnylmarung and neighbouring

communities in various training and employment opportunities. The community has also generated further income through the negotiated rent that is being paid by the Djaringo instructor. This money can then be used for other community development projects.

In Gnylmarung the main focus is in horticulture to help residents sustain their way of life in the community. The structure of the work is such that time is spent in each of the participating communities (with members from each community present) for 1 to 3 days work per week. The aim is to work on maintaining the land in an environmentally friendly manner around the communities, from lawns to fire-breaks and a variety of horticulture projects.

In addition to the establishment of a community vegetable garden, Alfonse and Delma have developed a nursery and are growing flowering plants and trees to sell to other community outstations and to householders in Beagle Bay. With support and training provided by Djaringo this project has flourished.

Community Issues

Despite the community's success in a range of developments access to sufficient good quality water remains an issue for residents. In June 2007 the community received an upgrade that incorporated a new 20,000 litre tank on a stand and the re-routing of their water mains. This upgrade was to ease not only the community's increase in water needs, but also to alleviate the need for the pressure pump. Unfortunately, this development has not entirely solved their water issues. They still have to use the pressure pump (run using energy from the Bushlight



Some of the items on sale through Gnylmarung's tourism enterprise

system that would otherwise be used at the community shed) and this issue still needs to be resolved. Bushlight is supporting residents to seek help in finding a solution to this situation.

Another issue is housing. Despite the construction of a new house in 2006, there is still limited liveable space within the community. In light of their recent development from an infrastructure, enterprise and sustainability perspective, it would really help their overall community development to be considered for a housing upgrade. This would enable more community members to move permanently to the community, which would in turn aid in the future sustainable development of the community.

Community Outcomes

With the introduction of reliable 24 hour power to the community, not only have residents been freed of the constant need to purchase diesel, but it has helped them to realise the aspirations they identified to Bushlight staff during Community Energy Planning. When Gnylmarung residents talked to Bushlight they hoped to have access to the energy services required to help them achieve and maintain their goals.

Two years on Gnylmarung has developed in leaps and bounds and is well on it's way to fulfilling that vision. The community has a growing tourism business, a community garden has been established, and Djaringo trainers work in the community.

With the development of these enterprises and the introduction of the CDEP run by Djaringo the residents of Gnylmarung have been able to improve opportunities for themselves and other locals.



Gnylmarung's horticultural enterprise involves the use of a greenhouse

