

LUDERITZ WIND POWER

PROJECT PROPOSAL

Comments:

- who is submitting project (which institutional)
- Unemployed youth (using indiv with drafting of prop.)
- Reflect on GIZ previous work.
- Target audience not clear.
- Robert also willing to assist.
- Need endorsement letter from MINE + LA (link to electricity supply)
- Env'tal impacts (noise pollution)
- NamPower (extensive studies)
- Cost not realistic
- Planning Grant ? - STEP

Phase approach - secretariat will work out phase -
through NMF

- Time schedule not realistic ?

Name of Organization: Luderitz Wind Power.

Name of Project: Provision of information, practical proposals and adoption of wind as a Renewable Energy

Location: Luderitz in the Great Karas Region. The project area will cover the Luderitz coastline area of about 100 square km

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Background:

The economy of Luderitz mainly depends on mining, fisheries and tourism and the town is regarded as the industrial hub of the Karas Region. Electricity supply for the local industry i.e. mining, fish factories, tourist accommodation and housing is supplied from the central electricity grid that obtains energy from a power station in South Africa. The concern for this dependency and increasing electricity prices are some of the reasons why this project was initiated. The project team is looking at wind as an alternative, clean and cheap means of providing electricity to Luderitz.

The project team consist out of a group of local inhabitants comprised of people from different spheres of the community. Although this project is concentrated on the Luderitz District, the groups activities are not only limited to this area, but aim to address other issues of national interest.

This project focuses on the use of Renewable Energy.

Geographical Location

Luderitz (26° 38'S; 15° 06'E) is situated in the Karas Region along the Namib Desert. It lies within a narrow strip of land along the south-western Namibian coastline in the cool desert climatic region.

The region is frequented by strong south- westerly winds resulting from an inter-play between the atmospheric pressure systems, solar radiation, the earth's rotation and the topography of the region. Another feature of the region is the occurrence of 'Berg' winds during the winter months of the year. These seasonal winds contribute to the weather character of Luderitz making it one of the windiest places on earth. The prevailing winds range from an average of 2.8 m/sec during the winter to as high as 7.5m/sec during the summer. (See Fig.1)

This weather patterns makes the area suitable for the use of wind energy.

The problem

Non-renewable energy sources such a crude oil has become expensive due to high demand resulting from an increase in the world population and uncertainty of supply because of political turmoil in other regions such as the Middle East from where the bulk of the earth's oil is derived. This project addresses this pertinent world-wide energy issue through informing the public and local institutions on the importance of Renewable Energy.

In Namibia, the increase in fuel prices and the country's dependency on energy supplies from SA is of great concern and the government places a high priority on introducing and developing

alternative energy sources. The introduction of wind energy can provide a cheap and efficient energy source that is not only environmentally clean, but also easier to exploit. This will also decrease Namibia's dependence on energy supply from neighboring countries and prepare the country for the future when fossil energy will be depleted.

Wind power is the fastest growing form of electrical generated energy and it is estimated to have grown from 25% in 2002 to 37% in 2005 world-wide. The costs of alternative energies are also decreasing. In the United States the cost of energy from wind has dropped by 85% in the last 20 years.

Namibia has high annual solar radiation and frequent strong winds along the coast-line. These conditions provide a tremendous potential for the use of renewable energy sources that can be introduced and utilized at low cost.

The Project:

The project team consists of persons from different backgrounds and age groups from the Luderitz community, who are all making their contribution based on their experience, technical expertise, know-how and creativeness to promote the use of small, cost-effective wind electric systems.

The project aims to gather and disseminate information on the advantages of wind energy and to promote the adoption of Renewable Energy in the form of wind energy.

The information will be gathered, organized and managed by the project team. It will be collected from different sources such as (literature, workshops, internet consultancy etc) through visits to libraries, relevant institutions e.g. MME, MFMR, MET, MOA, NGO's, as well as research and learning institutions such as Unam, Polytech, Natmirc etc.

In its initial phase, the project will gather and disseminate first hand information on the use of wind energy, contact the relevant authorities and other stakeholders and a review all legal documents, conventions and international agreements. This will be followed by an inclusive workshop to inform all stakeholders. A well-informed community can appreciate and take better responsibility of their environment i.e. less pollution and more appreciation of natural phenomena such as wind.

The following phase of the project is to formulate and recommend practical proposals, provide training and introduce and install small wind chargers (800W – 3kW), logging equipment, batteries and inverter components in the form of small home-based wind energy systems that can be used for individual households or for water pumping for aquaculture farms, factories and businesses. During the trial phase of the project, the systems will be constantly monitored to record the amount of energy generated, wear and tear of the spare parts and the general functioning of the equipment.

Participants, stakeholders and Beneficiaries

The primary beneficiaries will be the local community, who will through direct participation in the project, not only be able to acquaint themselves with their environment, but also have access to a cheap energy source that has a minor impact on their environment.

The project team has identified the regional and local authorities as key partners during all stages of the project development and aims to sensitize and involve these. To this end the project team has consulted the Luderitz Town Council through the Economic Development Officer and the Regional Councilor of the Luderitz District. The Town Council is currently responsible for the provision of electricity at the town. The electricity supply is however characterized by constant interruptions and power cuts as the result of the problems with the power grid, payment delays to

the power utilities etc. The project aims to provide the authorities with information and to recommend the introduction of wind energy. The adoption of wind energy generated locally will result in less dependency on other suppliers, help avoid the high costs of having utility power lines and allow for a better control over demand and supply.

Other beneficiaries of the project will include local *fishing and mining industries* whose production costs will be lowered through reduced energy costs. A reduction in electricity prices will also benefit local *business community* such as shops, hotels and tourist accommodation.

Stakeholders will also include relevant government institutions, research and learning institutions, NGO's and wind energy systems manufacturers and suppliers.

Central government.

The introduction of locally generated electricity will contribute to government's policy of decentralization as the responsibility for energy provision and control will be in the hands of the community and the local authorities. The project also contributes to the government's goals to develop Namibia into a technologically advanced state (Vision 2030).

Compliance with GEF and SGP Criteria

Non-renewable energy from fossils such as oil and coal are the main causes of global warming and current efforts are aimed at the introduction of renewable energy sources. The adoption a renewable energy in the form of wind can *reduce the effects of global warming* due to reduction no emissions of greenhouse gases and air pollutants. The adoption of alternative technologies in the provision of a cheap and efficient energy can lead to *improvement the livelihood of the community* due to cost saving and the *combating of environmental degradation*.

experiments.														
Indicate persons responsible for monitoring and progress reports:		Monitoring Frequency / Reporting												
Monitoring and Record-Keeping	L.Pieters, P. Johannes, A.Hendricks, T. Damens	X	X	X	X	X	X	X	X	X	X	X	X	X
Progress Reports	N.A. Mukapuli , B Dundee		X		X		X		X		X		X	

This table may be modified to meet the requirements of individual projects. It can be extended as necessary to cover all objectives and activities. Ideally it should be completed in the project development stage by the NGO/CBO with assistance from the National Coordinator and his/her Technical Assistant.

BUDGET FOR YEARS 1 & 2: LUDERITZ - WIND ENERGY ADOPTION PROJECT

Component	Bud	Unit	No.	Unit Cost (N\$)	Year1	Year 2	Total
Workshops, Meetings & Training							
Awareness & Promotional Campaigns, si	3		4	5,000	5,000	5,000	10,000
					5,000	5,000	10,000
Research and Surveys							
Literature					3,000	1,000	4,000
Data collection					2,000	1,000	3,000
					5,000	2,000	7,000
Training and knowledge transfer							
Consultancy and training fees	6	Lumps	4	23,000	10,000	23,000	33,000
					10,000	23,000	33,000

Promotional Materials	8	Lumpsum					
Printing / radio	9	Lumpsum		20,000	5,000	5,000	10,000
Audio-visual material		Lumpsum		50	30,000	20,000	50,000
Stationary				2,000	1,000	500	1,500
				22,050	36,000	25,500	61,500
Transport & Travel							
Local Travel M&E	10	Fuel costs		27,000	3,000	3,000	6,000
Travel to Service Centers & Suppliers	11	Fuel costs			5,000	5,000	10,000
Accommodation in WHK	12				2,000	2,000	5,000
					10,000	10,000	21,000

