

Scope of Work (2011-2012)

SUMMARY	DHARMASTALA	PAI-LAYOUT	TUBRAHALLI	CHITRADURGA
UDUPI	DHARWAD	RAMSWAMY-PALIA	PANAMBUR	OTHER PROJECTS

Integrated Energy Centre in Unelectrified Slums

Integrated Energy Centre's are solar powered community centre's that can host a range basic services and activities lacking in an under-served community. The centre aims at positively impacting quality of life and livelihoods by addressing fundamental energy needs and services relying on energy. This document is a brief progress report on four running centre's and four new energy centre's. Some of IECs partners, services and ongoing activities are mentioned in the under 'other projects'.

IECs

Energy centres are essentially solar powered independent service centers for rural spaces where services like lighting, mobile charging, charged batteries, are provided on a daily/monthly rental basis. Integrated energy centers (IEC) are energy centers that are co-located with any community space like a library, education centre, health centre etc OR vice versa i.e. education, health, finance services can be introduced in the energy providing unit so that these centers will become a hub for the underprivileged to access services that are either difficult to obtain or unreliable. Apart from this every IEC will promote the use of alternate energies, educate the users with possible methods and technologies that can be implemented for their need, and also connect the user to the provider keeping the users interest at highest priority. An IEC will work best in communities with energy scarcity. The following basic services can be provided from the energy generated at the centre, every initial/basic energy centre will have a combination of two or more of the following: lights for the space so that it can be used in evening and night, lights/lanterns/batteries on rent, Mobile charging, Solar powered water purification system, provision for educational aids such as computers, projectors, television etc.

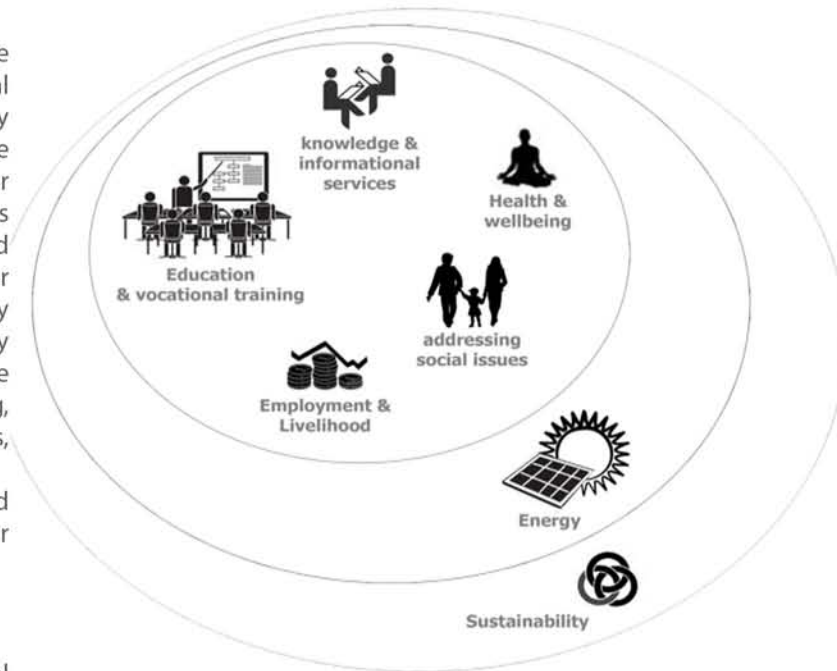
More services will be custom designed added and implemented depending on the partner and need. All additional services will only be provided by partnering with other bodies that have a similar goal and basic mission for the well being of the community.

NEED

Many Rural households and Urban Slums are permanent/ temporary/ migratory informal settlements that have no access to any kind of financing for various reasons like: income flow, nature of the settlement, land issues, remoteness and extreme poverty. These settlements have been using kerosene and firewood for all their lighting and cooking requirements for as long as they remember. They buy kerosene for about 40 Rupees a litre from the black market and use about 5-8 litres of kerosene per month. Furthermore the slums have various landowner and legality issues. Some of the other issues identified are: inadequate and insecure housing and basic amenities, limited access to employment opportunities and income, violent and unhealthy environments, Limited access to adequate health and education opportunities.

PROPOSAL

An Integrated Energy Centre can become a hub for the community to access basic services and facilitate other services through partners. A solar powered unit will be put up within the community to provide them with lights on rent, mobile charging and lighting for the space as a base to trigger off other projects and services.



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BACKGROUND

The temple town of South Karnataka has over 5000 visitors everyday and on festival time, this goes up to 10,000 or 15,000 visitors. The town is home to many residents and hawkers who run businesses around the temple. It faces power cuts at least two to three times a week which affects area around the temple. There are multiple services that people in Dharmastala have access to, the town is well served and well electrified in general.

ABOUT

The concept of Integrated Energy Centers (IEC) itself was born out of the H1- a centralized solar charging unit donated by Halloran Philanthropies and stationed in the temple town of Dharmasthala in Southern Karnataka. The center began in feb 2011 with the aim of being a demonstration and awareness center in the town, so that visitors from various villages will experience services and solar through the center. Initially the center catered to lanterns on rent, clean drinking water and mobile charging facilities for the floating population. Soon the need for such services and more became very apparent and many other services like community television, solar fridge (which flower vendors use to increase the life of flowers in summer), hawker lights on rent, fan, home light demo etc are channeled through the center. Some farmers rent out the lights and take them back to their land or villages which are sometimes over 40 km from the center.

MODEL

H1 is essentially a shipping container. The rent coming in through the services ensures that is center is financially sustained. In the first two months the center broke even and since then has been taking care of all running costs of the center. However since this is for a floating population and is primarily for awareness and demonstration the season and festivals ensure an increase and decrease in the income from the services.

CURRENT STATUS

The center is monitored by Belthangady Branch of SELCO and run by an operator who lives in the center itself. Other income generating services are being explored at the center.



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Background

Pai Layout is an urban slum situated near KR Puram in Bangalore. The slum consists of clusters of temporary settlements within a radius of 1 kilometer. The 150 odd households have been around for over 12 years but have remained completely un-electrified throughout this period. GMR-Varalakshmi Foundation, the CSR wing of GMR-an infrastructure company, has a Tent school in Pai layout which is in close proximity to the nearby clusters. Individuals here work as daily wage labourers and earn upto Rs. 250 a day. Households consume 5-7 liters of kerosene on a monthly basis. With no identity cards and no access to the Public Distribution system, they spend upwards of Rs. 250 a month on the purchase of kerosene from the black market- for lighting alone. To meet cooking needs, they purchase industrially discarded wood and use it on traditional 3-stone biomass stoves, paying Rs.800-Rs. 1000 per month.

About

The Energy Center in Pai Layout is co-located with the Tent school catering primarily to families of children attending the school. At present, the center provides solar powered lighting to 40 households in the slum. Current Services: Portable Home lightings, Study lighting (specifically for students), Lighting and Laptop charging point for the school (that aids audio-visual education programs), Cookstove Demonstration and awareness campaigns, Space has also been used after sunset for various health camps. Future proposed activities: Rent/sale of improved biomass cookstoves, Health camps through the volunteer based organization 'Doctors for Seva', Book and toy rentals for students,

Model

The center is housed within the tent school and run through community representation. A former student of the Tent school is the main operator and takes the support of the school teacher in running the center. The Capital costs have been met through soft funding, while the operational costs are covered through the rent received on a monthly basis for services provided. This rent essentially covers the salary of the operators and the maintenance, repairs and replacements. Ideally, the capital costs will also be recovered in a period of 5-7 years through the difference between the monthly revenue and costs.

Current Status

The center currently serves 160 people with lighting solutions. Some efficient biomass cookstove demonstrations have also taken place through this platform. The aim is to add a minimum of two more services/ activities to be undertaken through this center in the next 6 months. In parallel, the center is being monitored for technical performance as well as rent collections to ensure stability and consistency.



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BACKGROUND

Tubrahalli is a typical migrant urban slum, with similar conditions to Pai Layout. This community of over 200 households in the midst of urban apartments on open land has been un-electrified for the past 20 years. The Urban slum has a tent school run by GMR VF.

ABOUT

The center caters to:

Lighting for the School

Audio Visual aids (laptop charging point) for the school

Lights and Study lights on rent for the house holds

A complete cook stove program for the community

Future activities:

Community Television

Doctors for Seva (the space also acts as a health clinic once a week)

MODEL

A pre fabricated bamboo structure is put up with in the community, next to the tent school which houses the center and provides these multiple services.

This is an operator run model, where in the rent coming through the services of the center takes care of all the running costs of the center, including the operator salary and maintenance. A good percentage also goes back towards repayment of capital costs for the center.

CURRENT STATUS

Been running successfully and stably since March 15th 2012. Community television model and Livelihood generation project has started as of September 2012.



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BACKGROUND

This center was created to meet the energy needs of the Sadiq Nagar slum in Chitradurga. The slum consists of clusters of more than 100 households scattered in a radius of about 2 kilometers. This is a temporary settlement that has been around for nearly 3 decades. Although the permanent houses in and around the area have been electrified, these households have no way of accessing grid-based electricity. Ironically, this settlement is situated at the foothills of large windmills that profitably feed into the grid to meet the electricity needs of large cities like Bangalore. Families collect freely available firewood that is used for cooking. They use kerosene, purchased outside of the Public Distribution system at Rs. 45 per liter. Most families are supported by one earning member engaged in daily labour. Since these are thatched houses, the incidences of fire due to kerosene burning are also higher.

ABOUT

A mobile energy center seemed appropriate to cater to the scattered clusters of houses. It is run by an entrepreneur who uses a tricycle to distribute solar powered portable lights to about 35 households in the settlement. The charging station is fixed at the house of this entrepreneur, who runs this as a side profession- distributing lights in the evening on his cycle, collecting them in the morning and charging them during the day.

Current services: Portable home lights

Proposed new services: Hawker lighting; Mobile charging points

MODEL

For this particular center, the operator has availed of a 5 year loan from Pragathi Grameen bank in Chitradurga to put up the center. Soft funding was used as bank guarantee for the entrepreneur to avail of the loan. He uses the monthly revenue from light rentals to pay the Equated Monthly Installments on the loan. The difference between the rent and the EMI goes to the entrepreneur for his services.

CURRENT STATUS

The collection of rent is being closely monitored to ensure loan repayment can occur regularly. Possible services that could be run through such a mobile center are being explored.



Entrepreneur loading his tricycle in the evening to distribute to scattered households

Brief Progress Report September 2012 (INTEGRATED ENERGY CENTRE)

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BACKGROUND

The Udupi slum has over 200 households all of which have no connection to the grid. They use kerosene (about 5-7 litres a month in black) for lighting purposes. A few households have availed loan and own home lighting systems, however this is very difficult and very long process to have all the other households avail loans, and for the benefit of those who can't and don't want to- the energy centre can be set up for easy access at a nominal fee. Most of their firewood is collected or gathered with great difficulty. They have a well nearby for all their water needs. Parents feel the need for a tuition centre. Their main problem is toilet space and waste issues. They spend over 200 rupees on their energy requirements like lighting and mobile charging.

ABOUT

The plan is to implement an energy centre within the community which starts off with providing clean lighting to 50 households and then continues to explore other services that can be channelled through the centre.

Initial Services

Home lighting, Mobile charging, Soldering gun charging (for the entrepreneur)

Future Services

Community television, Cook stoves project, Rain water harvesting project

PROPOSED MODEL

Centre will be entrepreneur run by a man from the community who runs a soldering shop close by. The centre will need to be installed in a new structure right in the centre of the community. Solar panels and the charging station will be installed at the centre; users will rent out battery pack starting with Rs 50 per week. Rent coming in from the centre should take care of running cost and recovery of capital costs. The Center is proposed to be an entrepreneurial model.

CURRENT STATUS

Community meet with demonstration to determine number of people interested has been carried out. Bank and entrepreneur from the community have been finalized. The installation starts on September 15th 2012.



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Background

The Dharwad slum has over 140 households out of which over 50 have no connection to the grid for over 30 years. They use kerosene (get about 3 litres through ration and 4-5 litres in black) for lighting purposes. Most of the households spend about 150 rupees on firewood for cooking. There total energy expenditure including mobile charging is over 240 rupees per month. A community television model runs in the slum, in one of the electrified home owners. Main professions in this slum are labourers, vendors, contractors and other odd jobs. Basic income levels range from Rs 3000- Rs 7000; and family size is 6 people per family on an average.

About

The plan is to implement an energy centre within the community which starts off with providing clean lighting to 30 households and then continues to explore other services that can be channelled through the centre.

Initial Services

- Home lighting
- Mobile charging
- Cook stove demo & dissemination point

Future Services

- Community television
- Hawker lighting
- Weekly health clinic (doctors for Seva)

Proposed Model

Centre will be entrepreneur run by Ashmat ji (a woman from the community who runs a petty shop within the community). The centre will be installed in one of her own rooms next to her petty shop. Solar panels and the charging station will be placed at the centre; users will rent out battery pack starting with Rs 5 per day. Rent coming in from the centre should take care of running cost and recovery of capital costs over a period of 5 years.

Current Status:

After four visits and one community meet the need, space and potential entrepreneur/operator has been identified. A community meet will be carried out in the coming week to figure out number users we will be starting with, after which a design and costing will be done before approaching the bank.



Dharwad slum households



The Community



Center within the community

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Background

Privately owned land slum in East Bangalore has 90 households, 350 people (approx) who are Migrants from North Karnataka and are completely un-electrified for the past 8 years.

Each household uses approximately 5-7 liters of kerosene every month which they buy at 40 Rupees per liter.

They spend 45 Rupees on firewood every two days for a family of 4.

Mobiles are charger sometimes at their work space for free and sometimes by paying Rs 5 to a nearby shop or vendor who has grid.

As a community they buy water in groups of 20 families every alternate day (1 tanker=250 rupees).

They are mostly daily wage laborers and construction workers. Their income ranges from 3000-5000 per month which is extremely inconsistent. The family size is an average of

They do not have access to and cannot afford any other kind of basic facilities in terms of housing, electronics or amenities.

There is a tent School run by GMR Varalakshmi Foundation Catering to 45 children from the slum.

About

The plan is to implement an energy centre within the community which starts off with providing clean lighting to 60 households and then continues to explore other services that can be channelled through the centre.

Initial Services

- Home lighting
- Mobile charging
- Lighting for Tent School
- Charging laptop (Audio-Visual aids for school)

Future Services

- Cook stove demo & dissemination point
- Community television
- Health Camps

Model

Since most of the slums are spread across 0.5km radius, a solar cart model is proposed at this location.

Current Status

A basic need assessment has been done, type of centre is yet to be confirmed and community meets are still to be carried out.



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Background

The Nandeshwara temple and the sea port at Panambur makes the beach a popular place for visitors, tourists, locals and small business. During festivals the beach has over 20,000 visitors per week. Many specific cultural events and other small celebrations are all centered on the beach.

About

Services like mobile charging, photography, battery charging, umbrellas on rent and safety lockers can be good income generating activities for the center. Home lighting demos, light for education, hawker model, and other lab activities will be showcased at the boat center to get user inputs and spread awareness. Many problems from rural regions can be captured here through the visitors.

Model

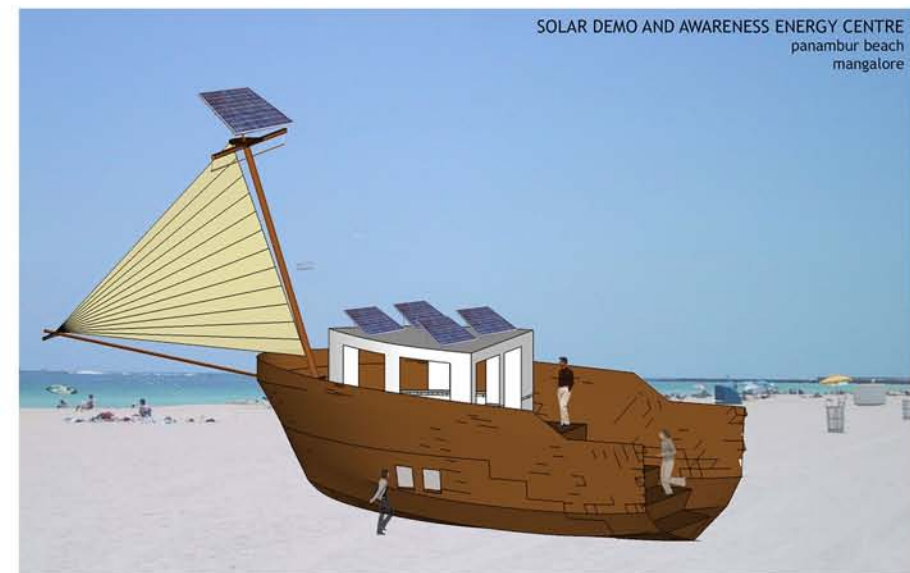
An awareness and demonstration boat shaped center is proposed for this space. The idea is to reuse a boat about to be discarded or dismantled.

Current Status

Budget is being worked on, to take a call if this would be a something worth going forward with.

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Doctors for Seva is an organization that maps health facilities for the under privileged, both geographically and in terms of connecting need-to the required attention. Doctors for Seva can provide free health clinic and camps every week for all the tubrahalli residents. Here are some of the things that DFS can help facilitate: They can arrange for general practitioners, pediatricians and gynecologists from nearby localities to volunteer in the energy center, which can give an good idea of the health of the people there; initially they can have awareness talks with the community on general hygiene to interact with them and get to know them better. At a later stage they can provide access to health care for critical cases and long term awareness about issues like malnutrition and home child births which are extremely common in the slum.

Livelihood generation activity: United Dry Good's CSR Hand Over Heart is ready to provide training for the women in the slum who do not go for construction work or who want the opportunity to earn an added income by doing work that they are already good at. They will provide all the necessary raw materials, training, market linkage and income to make this model possible in the slums. They are fully aware of the temporary nature of the slums and do have alternatives in case the women for some reason stop the work. Each woman earns depending on her capability and speed of work, they can earn up to 65-85 rupees a day (5 hour of work approx). We now have a person who help facilitate this program and mobilize the community. A group of 15 women will ne trained, after which a coordinator or leader from the group will be chosen as a representative.

Cookstoves: A detailed three phase cookstove program for Urban slums is currently in its third phase. This project was carried out to understand all the issues related to cooking in migrant labor communities and exploring best ways to solve it.

We are working on content that will be socially relevant content, so that the **community tv model** can be beneficial in more than just entertainment value. Apart from collecting different types of content we are also maintaining a library of relavant content through free and partner specific content. However the community television model itself is yet to be finalized.

New Products: For all future centers and new users of the energy centers we will be switching to a new product which consists of a fixed light at home and a portable battery pack. The first two will be considered as field tests for lanterns. Lanterns are conclusively deemed not the ideal product for such a model. We will continually work through the pilot phase trying to determine the best product for IECs.

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