Gram Vikas

The Biogas Programme of Gram Vikas

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Gram Vikas is a rural development organisation working with the poor and marginalised communities of Orissa since 1979, towards making sustainable improvements in the quality of life of the rural poor.

www.gramvikas.org

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About Gram Vikas

Gram Vikas is a secular, non-profit voluntary organization working in Orissa with the needy and weaker sections of society, to facilitate their development. It engages in activities aimed at improving the living conditions and the economic standards of the poorest of the poor, particularly tribals, scheduled castes, small and marginal farmers, landless and agricultural labourers. The main emphasis of Gram Vikas work is organising people to become aware of their existential condition, so that they take their destinies into their own hands and work to improve their lives. Full participation of the people is an essential part of such development activities to ensure sustenance of the programme and Gram Vikas withdraws as the people develop. Gram Vikas is also committed to the development and promotion of alternative and more efficient energy source in rural areas. It is governed by a board of outstanding persons with background in law, journalism, social work and trade unionism and is staffed by a team of young, committed and able professionals.

Gram Vikas' work is divided into two main programmes. The first is an intensive integrated development programme involving the Khond tribals of the Kerandimal hills in southern Ganjam district. The second stream of Gram Vikas' work is a programme promoting energy alternatives. Operating in backward areas throughout Orissa. One of part of the work in this area is the promotion of smokeless Chullahs, which are traditional wood burning stoves. In villages all over Orissa, Over 12. 2000 Chullahs have been built and 2,20 people trained in building them. The other thrust of the alternate energy stream is the Biogas programme, now operating in nine districts of Orissa.

Reasons for the Gram Vikas Biogas Programme

In the initial years of the Kerandimal programme, it was realised that the ongoing deforestation was having a strong adverse impact on the tribals because the lifestyle of the tribals revolved around the forest. The main cause of the deforestation is the demand for firewood. Promoting biogas as a substitute for firewood was one thrust of the many-pronged attack on this problem. Deforestation is a problem in a much wider area than the Kerandimals alone, and hence the programme now operates in 9 of the 13 districts of Orissa. Gram Vikas has chosen to work in the more backward districts of the state and in these districts, in the most backward blocks, with large tribal populations, so biogas is also seen as possible entry point for further development work in these areas. So when the government started the National Biogas Extension Programme, Gram Vikas decided to join in the effort.

Gram Vikas has adopted a broad-based strategy for it biogas programme, the spread of which seen in the various aspects of the programme:

- Construction of family size plants
- Construction of night soil plants
- Construction of institutional plants
- Construction of large size village community plants
- Training of biogas engineers, technicians and managers
- Training of biogas masons and promoters
- Training of housewives in the use of biogas
- Training of farmers in the use of spent slurry
- Practical research and experimentation with different type of plants in varied conditions and with varied biomass input.

Background of Gam Vikas Biogas Programme

Gram Vikas first got involved with biogas in a small way n 1977 with the construction of an 8 cum plant for the organizations own farm campus. This was followed by a 15 cum Janata Model Plant, also built at Gram Vikas headquarters.

In 1981, Gram Vikas built a 6 cum community biogas plant for a small inaccessible tribal village called Toda, located on a hilltop in the Kerandimals. Fuel wood was available in plenty around the village. But the only means of lighting was with kerosene, which was exorbitantly priced. The gas was used to illuminate the village, providing the people for the first time with a relatively powerful, reliable and inexpensive light source. The interest generated among the Kerandimal tribals as a result of this plant led to one of the very few successful community biogas programmes in the country, with community plants being set p in 9 other hamlets in the Kerandimals.

This programme continues with more such plants coming up each year.

By 1982, a lot of interest was generated in biogas, and several agencies to promote biogas, Gram Vikas built over 25 plants 1982 and also conducted training programmes for masons and supervisors.

Towards the end of '82 Gram Vikas decided to participate in the National Biogas Extension Programme. This project

The internally set targets and the actual number of plants built by Gram Vikas exceed the norm based targets set by AFPRO as shown below:

Year	No. of Plants	
	Target	Constructed
1983	200	213
1984	650	687
1985	1,350	2,002
1986 up to Nov.	1,500	3,128
Total	3,700	6,030

In terms of geographical spread, the work which was originally proposed for to 5 districts spread to all 13 districts, later withdrew to nine districts and within these districts to the blocks with a concentration of tribal population. The districts now covered are Kalanhandi, Bolangir, Koraput, Phulbani, Ganjam, Cuttack, Mayurbhanj, Sundergarh and Sambalpur. This includes the relatively remote and poorly connected regions of western Orissa. To undertake this work, a staff of 157 persons has been built up, consisting of 120 supervisors, 9 plumbers, 9 office assistants, 12assistant coordinators, 3 zonal coordinators and 5 support staff at the Gram Vikas head office. This team has gained considerable experience in both the technical and organizational aspects of the biogas programme. The need now is to restructure the organization to adjust to changing needs, to consolidate the experience gained, and to give continuity to the organisation and work.

Mode of operation at the Field level

The biogas super visors when entering a new block, usually pick a village within the target area on a random or convenience basis. In this village, they interact with the people at their conventional meeting places like tea shops of under a tree, etc. When talking with the people show curiosity detailed explanations are given. Discussions will cover various aspects of biogas i.e. the many benefits, the various pre-requisites, the procedures involved in constructing the plants, the subsidies and loans available, the cost of the plant, and so on. At this and stage several visits are usually made before some prospective users show interest and a desire to construct biogas plants. Now an actual feasibility verification is performed, with visit to the person's house, to count the cattle, to check the availability of land to build the plant, etc. If all the necessary conditions are satisfied, and the person has enough motivation to go through with the process, the supervisors now helps the beneficiary to organise his bank loan. This involves considerable red tape, like acquiring no dues certificates from other banks, all cooperative societies and credit societies in the area, etc. and several visits to the bank.

Once the first installment of Rs.500 is released to the beneficiary, the site is demarcated y the supervisor and pitting begins. Simultaneously the supervisor explains to the beneficiary the various materials required and ensure that the supply of the required quantities of materials of the proper grade is arranged.

Once the pitting is completed, the second installment is released to the beneficiary, which is used to pay for the materials that will now arrive. The supervisor checks the grade of the materials and ensures that the beneficiary has paid a fair price for the material purchased. After all the material has been got, the mason is sent to the site, along with any trainee masons he may have, and the construction works begun.

At critical stage in the construction, like the casting of the dome, the inside plastering, the casting of the expansion chambers, etc. the supervisor is present to ensure that the work is proper.

The plant cures for twenty days, during which time the third installment is negotiated and a plumber is sent to the site to install the necessary piping and fixtures. The supervisor then has to ensure that the cement is cured properly, and that the plant is covered with earth, and the expansion chambers are covered with slabs. The supervisor is present when the plant is charged, to check the mixture used and after some days for the gas to build p is present for the first lighting. He tests the plant for leaks and verifies the proper functioning of all appliances, carrying out remedial work wherever necessary

Gram Vikas personnel do not handle any of the cash that is spent on the plants, the dealings are directly between the beneficiary and the other parties. This is to increase the involvement of the beneficiary in the whole process so as to increase his commitment to the plant and is compatible with the role Gram Vikas wishes to adopt, that of a facilitator and not a contractor.

At the present time, the effort needed to convince a potential user of biogas about the benefits involved is considerable. The supervisor may need in some cases, to make five or six visits before a person decides he wants a biogas plant. A several more are required to facilitate the purchase of materials, etc.

Consequently the expenditure in man-hours and

time is very high when considered on a per plant basis. This is in stark contrast to some of the forward states where people queue up to have plants built, and the implementing organization's role is restricted to certification and inspection.

The government of India offers a turnkey fee of Rs.300/- to the implementing organization irrespective of the size of the plant of the particulars of the beneficiary. The amount is uniform all over India. This fee is intended to finance turnkey operations for plant construction and also includes two ear maintenance and guarantee clauses. This fee, taking into account the areas where Gram Vikas operates, is woefully inadequate.

A general restructuring of the biogas organisation is planned, with people being moved from construction to maintenance from the third tear on wards, so that after five years of the programme, the emphasis will shift to maintenance of the plants already built.

With several thousand more plants being built each year, the awareness and acceptance of biogas is expected to rise over the years. The expectation is that, in five years time it will be possible for independent turnkey operators to build plants financed by the turnkey fee alone. The large pool of skilled and experienced personnel that will have been built up will be able to work independently or with other voluntary organizations, to Promote biogas all over the state. A technological development anticipated is that of plants operating on any biomass, including vegetation. This will widen the class of potential users to include people not awning cattle. Gram Vikas would promote such plants in a major way, and the experience gained by personnel in this programme could be put to use to promote the new technology.

The personnel will have gained considerable field experience in motivation, training and other allied skills and will be an invaluable resource for any challenging area of developmental activity into which Gram Vikas will move.

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