



Rajiv Gandhi Grameen Vidyutikaran Yojana Social Survey Report

RGVY – Progress Unlimited

Decentralized Renewable Energy = Energy Equity

Madhubani district, Bihar

Social survey organised by:

Greenpeace India and SAKHI, Bihar

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I. Introduction:

Access to energy is a cornerstone for development and essential for a better quality of life. When this access doesn't exist or is very poor, it has negative impacts on everything from education, to health, and employment - touching all aspects of life and livelihood.

The Indian energy system is concentrated around the conventional system of centralised electricity generation relying heavily on coal based thermal power plants and large dams. However, there is a large body of evidence to show that the centralised system has not been able to balance demand and supply, and has resulted in inequities and environmental degradation which has left more than 40% of the Indian rural population in the dark (Kaudinya, Balachandra and Ravindranath, 2009). Even if the grid has reached a village, it doesn't mean that electricity has reached the village as they are the first to be taken off the grid.

The Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) is a flagship programme of the government of India which began in April 2005 and aimed to accelerate the pace of rural electrification programme in the country. The Ministry of Power is the nodal agency implementing the scheme with a mandate to attain the National Common Minimum Programme (NCMP) goal of providing electricity to all households by 2010 (extended to 2012 in 11th five year plan). However looking at the implementation pace Government is planning to take it up in the 12th Five Year Plan (2012-17).

The scheme has focused mainly on the development and extension of the centralised grid system to rural areas to **provide quality and reliable power**. This has however been far from successful. A faulty definition of "village electrification" has diluted the scheme's aim significantly. According to state-wise data, on the RGGVY website¹, providing free electricity connection to all below poverty line (BPL) households has not materialised in most states of the country.

Therefore, it is imperative that RGGVY is reviewed by the people before it is continued in the 12th plan period and people's concerns and suggestions are taken into consideration to ensure that the scheme does deliver quality energy to the millions in India currently deprived of it. Greenpeace India has initiated a social audit to enable such a process in Bihar, Uttar Pradesh and Andhra Pradesh. The aim of the audit is to bring out the implementation reality of the scheme and examine whether the mandate of the scheme has been fulfilled or not.

II. RGGVY and power situation in Bihar

The power situation in Bihar is one of the worst in the country. The state lost majority of its power generation capacity (from 1974.1 MW to 584.1 MW)² and coal resources to Jharkhand in 2000. There is huge demand for energy in Bihar and equally huge deficit. If measured by standard per capita power consumption, Bihar is the lowest at 91 units and carries the highest peak deficit at -33.7%.

¹ http://rggvvy.gov.in/rggvvy/rggvvyportal/plgsheet_frame3.jsp

² <http://energy.bih.nic.in/>

The state is the largest beneficiary of the RGGVY scheme in terms of budgetary allocation. The budget allocation for entire Bihar for RGGVY work has been Rs.4265.9³ crore of which 80.9 % money has been released so far.

III. RGGVY Social Survey in Madhubani district, Bihar

A total of 1024⁴ villages across 21 blocks of Madhubani district have been incorporated in the RGGVY project. The villages under the scheme are of 'un-electrified and de-electrified' as well as of 'previously electrified and taken up for intense electrification' category. National Hydroelectric Power Corporation (NHPC) is the implementing agency of RGGVY project in Madhubani district in Bihar.

According to RGGVY website data, although significant 97% un/de-electrified village electrification has been achieved so far work on intense electrification been slow with only 43.6 % achievement. However, only 68.4% (146047 out of 213640) BPL households, entitled for free connection, have received the facility.

Greenpeace along with its Partner organisation Sakhi and local RTI activists carried out social survey of the scheme in Madhubani district based on the information procured by the government on electrification status in the district through Right to Information Act. A total of 170 households⁵ across 6 villages from 6 blocks of Madhubani district were surveyed as part of the social audit process.

IV. Survey Methodology and Process

As mentioned earlier, Bihar is the largest beneficiary of the RGGVY scheme due to its meagre rural electrification scenario. Six random sample villages were taken from six blocks of the district where village electrification work under RGGVY scheme has been completed as per government records.⁶

List of BPL connections, proposed and released, were verified in the selected sample villages. Both above poverty line (APL) and BPL beneficiaries and those excluded were interviewed one to one. These interviews were conducted based on a survey questionnaire and seven approaches – speed of provision, quality of supply, inclusion, affordability, security of supply, rural development index and awareness on climate protection. Awareness generation meetings were held in the villages to inform people about their entitlement under the scheme and alternative pathways to generate electricity through renewable sources.

V. Observations from the survey:

The survey examined various social parameters in villages of Madhubani district. The process of survey was inclusive and gave opportunity to respondents to express their opinions freely. Observation and findings from survey are summarised below:

³ <http://rggvv.gov.in/rggvv/rggvvportal/bcovered.jsp?stcd=10&dtcd=05>

⁴ <http://rggvv.gov.in/rggvv/rggvvportal/bcovered.jsp?stcd=10&dtcd=05>

⁵ See annex- Table 1

⁶ Information on meter connections was missing for Gidrahi (Laukahi) and survey was done after noting down respondent's meter numbers.

1. **Socio economic parameters:** Most of the people surveyed belonged to BPL category and their main occupation was either farming or casual labour. 92.35% of the surveyed households have an annual income which is equal to/less than INR 24,000.

2. **Awareness on the scheme:** Awareness about RGGVY scheme among people in Madhubani district was abysmal. It was found that 92.35% of the respondents were not aware of the scheme even though their villages and households had been electrified between 2009 and 2011. Local contractor also passed wrong information to people which led to confusion in the village. In most villages, above poverty line APL families had either been misinformed that the scheme was for BPL families, or they had simply not bothered to get connection because of lack of knowledge on the procedure to get connection and measly electricity supply.

3. **Quality of supply:** The 95.3%⁷ of the families who had received metered connection under RGGVY reported that the electricity supply was erratic, unreliable and of low voltage, often available only after mid night when they have no use for it, which rendered the connection useless for them. Villages like Parwalpur (Madhepura Block) reported no electricity at all even though connections had been given in 2010.

An overwhelming 94.11% of the respondents preferred electricity supply after sunset and 33.5% of the respondents demanded electricity for noon as well. People acknowledged and expressed its importance for better living conditions. They preferred electricity for multiple activities such as children's studies (85.8%), cooking (50%) and other household chores such as cleaning, washing etc (6.5%).

4. **Inclusion of stakeholder in the scheme:** Not surprisingly, only 24.22% of the respondents were aware that BPL families were to be allotted free connection. 76.39% of beneficiaries reported payment for the metered connection. It is quite clear from survey that people paid INR 100 to 1000 to local contractors to get the connection. A total of 97% of the respondents reported that they had not been informed about the scheme by the Panchayat or the mukhiya (village head). The mukhiyas of all the villages complained that they had not been contacted nor their support sought throughout the whole process of distribution of metered connections.

5. **Capacity of people to spend on energy/electricity:** It was quite evident from the survey that people have willingness and ability to pay for energy and they are not largely dependent on government for the same. An overwhelming 87.5%⁸ of the households covered under RGGVY scheme were using and spending on kerosene as an alternative source of lighting. 63.52% were paying INR 50 to 100 on such alternative sources of energy.

6. **Security of electricity supply:** Almost all villages seldom experienced secure electricity supply for even a day. The newly laid transformer had been burnt in Gopalpur soon after installation and had to be repaired by the people themselves. The cause could be attributed to low capacity transformers installed under RGGVY (not more than 25KvA). Bihar has a high density of population and hence the transformer

⁷ See annex- table 2

⁸ See annex table 3

capacity has to match the people's demands (100kVA transformers)⁹. The state is also riddled with demand side management inefficiencies and has a high incidence of theft and commercial losses.

- 95.29% of the respondents had no knowledge of where or whom to complain to in case of problems with transformers, grid lines or meters. They also had no idea of where the nearest electricity board office was.
- 45.34% of the respondents who had got connection under RGGVY reported that they did not know who had the responsibility of repairing the transformers. 49.68% of those surveyed reported that it took more than 4 days for burnt transformers to be repaired. Interestingly, 4.96% of the respondents reported that the transformers were never repaired by any officials, and eventually they were forced to collect money on their own and get it repaired. The transformer in Gopalpur (Harlakhi Block) had been repaired by the people themselves and hence was working at the time of the survey.
- 37.64% of the households surveyed expressed confidence in the Panchayat if given a choice to choose an agency they trusted to provide reliable electricity followed by local energy company (31.76%) and local electricity department (24.7%).

7. **Rural Development Index:** Given RGGVY's mandate of enabling indirect benefits through electrification of panchayat bhavan, schools, health centres and micro enterprises, the survey also tried to understand the effect of RGGVY on the above. Additionally, the survey also queried on the benefits of electrification on irrigation, an important aspect of agricultural and rural development missed by the scheme.

Irrigation: Only four respondents from Raghepura (Bisfi) reported that they had electricity connection for irrigating their farm. Raghepura was the only revenue village in the block which had been surprisingly given a community irrigating pump by the local administration some years back. 35.88%¹⁰ of the respondents reported the use of diesel generators for irrigation while the rest depended on rains¹¹. Madhubani also has a good irrigation system through series of canals.

Micro-enterprises, health centres, schools, Panchayat Bhavans and cold storage: Gopalpur (Harlakhi Block), Raghepura (Bisfi Block), Kapasia (Benipatti), Deora (Babubarhi) and Parwalpur (Madhepur) had micro enterprises such as wheat mill while the other villages did not seem to have substantial enterprises except for grocery shops, tea shops etc. However, none of the local enterprises had access to electricity and were dependent on kerosene and diesel. Amongst all villages surveyed, Kapasiya could boast of a health centre in the nearby village of Loha, which again had no access to electricity. Gopalpur, Kapasia and Deora had schools but none of them had access to electricity. The mukhiyas were unhappy with the implementation of the scheme and reported that Panchayat Bhavans had not been connected under the scheme. None of the villages surveyed had a cold storage.

⁹ See annex table 4

¹⁰ See annex table 5

¹¹ See annex table 6

8. Awareness on Climate change and climate protection:

38.23%¹² of the respondents were aware that coal and diesel caused pollution, while very few knew about the connection of coal with climate change. 31.76% of the respondents were aware that renewable energy is environment friendly.

An overwhelming 92.35% preferred renewable energy over coal and diesel if given a choice in the matter. Their preference stemmed from the observation of solar street lanterns which had been installed in their villages and seemed to be more reliable than grid electricity.

VI. Inference from the survey

RGGVY has brought a ray of hope to people by extending grid to their villages and ensuring that they have a place in the centralised electricity infrastructure. However, the local governing body like Panchayat, have no say and participation in the implementation of the scheme.

The survey clearly indicates that local authority didn't make any serious effort to educate people about the programme. People neither had knowledge of the scheme entitlements (facilities to BPL and APL households) nor understanding of the kind of physical infrastructure (poles, grid wiring, transformers and meters) to be built under the scheme. The survey finds that local corruption and poor quality infrastructure development has made the scheme a failure.

Survey also established the fact that many BPL families were left out from electricity connection as local contractor had mandate to provide only 10% connection. This has resulted in widespread corruption and people who could afford paying the contractors seem to have secured a connection while the others feel left out.

In many cases, the low capacity of transformers under the scheme had resulted in overload and burn out. This raises serious questions of whether it is enough to just invest in centralised grid infrastructure without ensuring that people are able to access real electricity through the same. Additionally, a centralised scheme has no space and flexibility for regional variations. Given Bihar's density of population, transformer capacity needs to be more.

Keeping apart the indirect rural development ambitions, the scheme failed in the district to provide the benefits it has promised under its mandate. At the same time there is a mismatch with aspirations of rural people and the current scheme facilities particularly on issues of irrigation and micro-enterprises.

Consequently, the scheme has not realised its vision of fostering rural development by ensuring electricity access to irrigation, micro enterprises, schools and health centres.

VII. Recommendations

- Rapid uptake of small scale renewable energy generation (grid connected and off-grid) units in non-remote areas is needed to ensure quality electricity generation and supply at local level

¹² See annex table 7

- Left out BPL families (due to faulty Government project reports) should be given free connection as soon as possible and hence special budgetary allocation need to be made under 12th plan to carry out the work
- Transformer capacity in densely populated villages need to be increased to cater household needs as well as to facilitate irrigation needs
- Mandatory provisions have to be made for involvement of PRIs for better implementation and sustainability of the scheme
- Provisions need to be made for energy requirement for irrigation and medium and small scale industries
- Last but not the least, embedding the social audit component in the scheme is necessary to enhance accountability of the implementation system

Annexure

Annexure 1: List of acronyms

RGVY: Rajiv Gandhi Grameen Vidyutikaran Yojana

PGCIL: Power Grid Corporation of India Limited

BPL: Below Poverty line

APL: Above Poverty Line

PRI: Panchayati Raj Institution

Annexure 2: List of tables

Table 1: Details of villages surveyed in Madhubani

Blocks	Benipatti	Babubarhi	Bisfi	Laukahi	Madhepur	Harlakhi
Villages	Kapasias	Deora	Raghepura	Gidhrahi	Parwalpur	Gopalpur
No of BPL families surveyed	36	15	30	39	24	17
No of APL families surveyed	2	3	2	1	0	1

Table 2: Electricity supply for beneficiaries under RGVY and expected supply (in hours)

Hours of electricity supply under RGVY (in %)				Hours of supply needed (in %)			
None	Up-to 1 hour	3 to 4 hours	6 to 8 hours	6 to 8 hours	8 to 14 hours	14 to 20 hours	24 hours
24.11	42.35	31.76	1.76	77	21.17	0.58 (1 person)	0.58 (1 person)

Table 3: Monthly expenditure on other energy sources

	Less than INR 50	INR 50 to 100	INR 100 to 300	More than INR 300
% of respondents	32.35	63.5	4.11	

Table 4: Electricity received in a month (in days) and status of transformers

Security of Supply						
Villages	Kapasia	Raghepura	Gopalpur	Parwalpur	Deora	Gidhrahi
No of days of electricity in a month	Less than 10 days	Less than 10 days	10 to 15 days	No electricity	Less than 10 days	Less than 10 days
Transformer status	Working	Working	Working	Not working	Working	3 burnt and 1 working

Table 5: Irrigation methods used by households

Method of irrigation	Rain fed	Diesel Generator	Sprinkler
No of households	123	61	4

Table 6: Monthly spending on irrigation by households

	No spending	Less than INR 300	More than INR 300
% of households	64.11%	30.00%	5.88%

Table 7: Knowledge on source of electricity generation

	Don't know	Coal	Water	Renewable Energy	Diesel	Nuclear
No of respondents	67	55	50	2	0	0