# A people's manifesto for Bihar

## Empowering the state and its people

Bihar is the third largest state in terms of population, and is a key state politically. Bihar's state of affairs including administrative and governance system has seen improvement in the recent past and this makes the current elections a litmus test for what direction the state will steer itself into the future.

Bihar announced earlier this year that it had notched an 11% GDP growth for last five years, making it the second largest growing economy in the country, this news was greeted with a sign that India's most backward area has been transformed for better. However, Bihar also has significant challenges when it comes to addressing the basic needs of its people. It is this dichotomy between the immense possibilities that Bihar holds out and the massive challenges it faces to ensure that the growth reaches its people and is sustainable.

Though the turnaround story of Bihar is impressive, all the sectors have not fared well in the state. The worst scenario can be seen in terms of energy security, where not a single project could take off due to lack of resources. With one of the worst power situations in the country, it is becoming increasingly clear that electricity will soon become one of the bottlenecks for Bihar's development. The state is looking to expand its power production via investment in large thermal power plants and hydro projects. However, these projects will take time to be implemented and till then Bihar's growth would continue to be effected by crippling power shortages.

The government who can deliver 'energy now' will hold sway with voters in the coming elections.

**Current electricity scenario in Bihar**

There is a huge electricity deficit - an average per capita consumption of 75 units, compared to the national average of 613 units - with little prospect of plugging it through traditional methods. Bihar is left with almost no energy after bifurcation of Jharkhand. Bihar lost most of its coal plants to its daughter state and the state neither has the coal reserves nor any other fossil fuels to generate electricity. It does, however, have a high amount of sunlight and moist, fertile, alluvial plains with lot of agricultural waste to produce enough Bio-mass energy.

The state's plans to expand its power production through large thermal power plants and hydro projects have been delayed due to land allocation issues and absence of coal linkages. In the meantime its people suffer with no quality access to energy and no hope of getting it in the near future unless there is a clear shift to seeing how renewable energy can deliver quick, quality and sustainable power now.

| Bihar- Generating capacity | | | |
|---|---|---|---|
| Hydel | Thermal | Gas/Wind | Total |
| 46.1 | 540 | | 586.1 |

At present, Bihar is unable to meet the peak requirement and has witnessed about 32%[2] of deficit. It is expected that at the end of 11th Plan though the country might be able to meet its energy requirement and peak demand, but Bihar would continue to face energy & peak shortage of about 41% and 58%,[3] respectively.

Greenpeace' Report - "Still waiting - a report on energy Injustice" clearly indicates a great apathy towards small towns and villages of India. People in small town and villages in Bihar don't plan their life around electricity. In fact, people consider the erratic electricity supply as being there to just charge their mobile phones.

The following tables clearly describe the energy injustice in Bihar:

**Survey Data Highlights for Bihar - Still Waiting: A Report on Energy Injustice, November 2009, Greenpeace**

| | Tier A location (Patna) | Tier B location (Arrah) | Village 1 (Dumri, Buxar Dist) | Village 2 (Bakri, Bhojpur Dist) | Village 3 (Ekauna, Bhojpur Dist) |
|---|---|---|---|---|---|
| **Annual peak hour demand** | 15 to 21% deficit | 28 to 33% deficit | No supply during peak hours | No supply during peak hours | No supply during peak hours |
| **Annual energy required** | 7 to 13% deficit | 45 to 50% deficit | 90 to 93% deficit | 80 to 85% deficit | 80 to 85% deficit |
| **Average no of hours of supply** | 20 to 24 | 12 to 15 | 4 to 8 | 5 to 8 | 8 to 10 |
| **% of household electrified** | 91 | 72 | 21 | 28 | 55 |
| **Per capita consumption (kWH)** | 173 | 47 | 42 | 89 | 83 |
| **People's perception of quality of electricity** | Average | Poor | Poor | Poor | Poor |

**Status of rural electrification**

The Government of India's promise of 'electricity to all' by 2012 through the Rajiv Gandhi Grameen Vidyutikaran Scheme (RGGVY) has invested crores into centralized energy infrastructure through grid improvement and expansion to all parts of the country. However even after 5 years of implementation, as many as one lakh villages are yet to be electrified while millions continue to suffer from low quality

[1] Road Map for Development of Power Sector in Bihar, July 2007: A Report of the Special Task Force on Bihar, Government of India.
[2] Road Map for Development of Power Sector in Bihar, July 2007: A Report of the Special Task Force on Bihar, Government of India.
[3] Road Map for Development of Power Sector in Bihar, July 2007: A Report of the Special Task Force on

to those that receive an electricity connection in reality.

In-spite of being a priority state under RGGVY, Bihar is one of the least electrified states in the country, with some estimates putting the electrification status at 30%. Large scale up-gradation of the electricity infrastructure via new transformers, grid lines etc has been undertaken under RGGVY. However due to severe electricity shortage, the newly installed grid infrastructure is lying idle and in many cases is being vandalised and stolen.

Take the example of Saran district: some 84 crore rupees have been spent electrifying the district under the RGGVY, yet most of the 'connected' villages have not received supply past the initial few weeks. The electricity board is ordered to provide free power to the rural community, yet the low payment combined with transmission and distribution losses make this a non sequitur for the commercial entity.

**Decentralised energy in Bihar**

Bihar is full of decentralised energy. The micro-grids of diesel merchants span the villages and towns, collecting hooked-up prices for dirty fuel. The government of course realises that widespread diesel use is not sustainable, but there are some elements of this model that we can learn from.

The diesel model is right in that distribution is decentralised and via locally-protected mini grids; it is wrong in that it uses a costly fuel that must be transported long distances over pockmarked roads. We propose a similarly decentralised model, but utilising locally-available renewable resources: solar power, micro-hydro, biomass gasification and others. These are cheap or even free, clean, and in constant supply. This model is called decentralised renewable energy.

**Decentralized Renewable Energy: An Alternative Energy Paradigm**

Decentralized Renewable Energy (DRE) model works on the principle of producing electricity through renewable energy near the source of use or consumption. For example, a village which receives abundant sunshine throughout the year and has surplus biomass could become self-sufficient in energy by producing power through a combination of renewable energy technologies such as solar energy and/or biomass and manage the system locally. The model ensures democratization of the process of power production and secures access to reliable and quality energy for the community via utilization of locally available resources.

**Why Decentralized Renewable Energy**

Development being synonymous with access to power, quality energy would energize households, schools, health centers etc, lead to improvement in agricultural productivity and encourage employment generating activities. It will foster inclusive development of rural populace in India bringing them on par with urban areas in terms of amenities, facilities and opportunities, consequently stopping the migration flow from rural to urban areas.

**Successful Decentralised renewable energy Projects in Bihar**

DRE has the potential to deliver 'energy now' to the people of Bihar. Projects could use a variety of technologies and materials, selected as a result of local resources, and distribute the electricity to domestic and commercial end-users through a micro-grid. While projects may be off-grid initially, there is

DRE is already being implemented by private businesses in Bihar. In West Champaran district, Husk Power Systems (HPS) are using biomass gasification to generate electricity from rice husk, which was selected after local analysis revealed it was the only waste product in villages in that area. HPS has over 30 power plants already, and 30 more in production. They supply reliable electricity directly to end users, who pay a fee for the service. As well as generating employment in the area, both through the plant and by enabling micro-enterprises to be set up, end users save almost half of what they were previously paying for diesel. HPS anticipates having 2014 plants by 2014, in Uttar Pradesh, Assam and Nepal, as well as Bihar.

**The way forward**

**Greenpeace believes that a resurgent Bihar can chart an alternative development pathway via decentralized energy infrastructure to provide for the energy needs of the rural population in an equitable and sustainable manner. Bihar needs an energy revolution now and decentralized renewable energy can fuel that change.**

The centralized infrastructure of electricity generation and distribution is riddled with institutional, tariff and many other issues. Such an electricity paradigm has translated into priority access to urban areas and industrial units leaving large swathes of rural areas grappling with energy poverty, crippling their development and contribution to the resurgence of Bihar.

Decentralized renewable energy on the other hand can **energize** the state **now** by enabling communities to produce and manage power according to their needs by utlising local resources. Such an alternative energy paradigm could foster inclusive and sustainable development, enabling Bihar to leapfrog into the future and showcasing to the world a new decentralised form of development-bottom up.

**Greenpeace Demands**

1. Re-evaluate the current energy policy and do away with the fossil-fuel based direction and instead frame the policy which takes care of the energy need of people when they need it most
2. Develop a State based regulatory framework to encourage utilization of renewable energy through a Renewable Energy Law. The new law should be drafted with proper and wide consultations to ensure robustness of the policy.
3. Promote Decentralised Renewable Energy to deliver quick, quality and breadth of access of energy to communities which will help inclusive growth and development of the people of Bihar.
4. Establish appropriate finance mechanisms to enable implementation and maintenance of decentralized renewable energy systems.
5. Create adequate infrastructure at the government level for successful implementation of decentralized renewable energy. It should have education, showcasing of technologies and creating budgetary framework for better implementation.
6. Influence the National Energy policy and audit of the RGGVY in favor of Renewable Energy