



empower

GREENPEACE

Decentralised Renewable Energy and India



It was Rahul Gandhi who turned Kalavati, an impoverished widow living in a Maharashtrian village that gets little electricity, into a national identity. The congress general secretary invoked Kalavati's woes while pitching for the nuclear deal in 2008, saying that the deal would bring electricity to Kalavati's doorstep. Nuclear power is still a long way off but environmental group Greenpeace has zeroed in on Kalavati's village, Jalka, and set up solar panels that power 10 fans and a laptop in a school. Their message: it will take nuclear energy 20 years to empower Kalavati's village but solar energy took three days.

Priya Sahgal India Today



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This is Greenpeace

Greenpeace is a global campaigning organisation that acts to change attitudes and behaviour, to protect and conserve the environment and to promote peace by:

Catalysing an energy revolution to address the number one threat facing our planet: climate change.

Defending our oceans by challenging wasteful and destructive fishing, and creating a global network of marine reserves.

Protecting the world's remaining ancient forests and the animal, plants and people that depend on them.

Working for disarmament and peace by reducing dependence on finite resources and calling for the elimination of all nuclear weapons.

Creating a toxic free future with safer alternatives to hazardous chemicals in today's products and manufacturing.

Supporting sustainable agriculture by encouraging socially and ecologically responsible farming practices.

Greenpeace exists because this fragile earth deserves a voice. It needs solutions. It needs change. It needs action. Greenpeace's goal is to ensure the ability of the earth to nurture life in all its diversity. At Greenpeace, we believe in the power of the many. The future of the environment rests with the millions of people around the world who share our beliefs. Together we can tackle environmental problems and promote solutions.

How India can deliver “*Reliable* Electricity for all by 2012”

India is yet to develop the **energy infrastructure to power the entire country** and therefore has an **opportunity to build the infrastructure of the future**. Greenpeace believes that reforms in the energy sector would require **nothing short of an Energy [R]evolution**. To ensure that everyone has access to quality power and **a planet that can sustain future life on it**.

Energy poverty is one of the most serious problems that the country faces today. While the government has set a timeline of 2012 for providing ‘electricity to all’, 78 million households still lack access to electricity and many more millions have access only in principle and not in reality. India is yet to develop the energy infrastructure to power the entire country and therefore has an opportunity to build the infrastructure of the future.

Greenpeace believes that ‘electricity for all by 2012’ can be delivered in a manner that addresses equity of access and respects the natural limits of the environment only if we implement large scale uptake of renewable energy through decentralized energy systems. Expansion of coal, large dams or nuclear energy will not only damage the environment irreversibly, but will never provide priority access to the poor. Renewable energy can provide immediate solutions for quality connectivity in rural areas. It would involve production, distribution and transmission of power in a decentralized model. A village can be completely self-sufficient with respect to electricity and energy if this decentralized model is created. The model would entail a hybrid renewable

energy system where each resource available in the village would be utilized for production of electricity and energy. The excess amount of electricity generated from this system could be fed back into the grid for further strengthening of the central power system and simultaneously provide an income generation opportunity for the people of the village, as they can sell the unutilized power to the grid. Greenpeace in order to showcase decentralized renewable energy has installed two solar panels in Jalka village Zila Parishad School and a NGO run Secondary School, which runs 10 fans and a computer on solar energy. The installation was completed in a mere 3 days. This symbolic gesture has instilled confidence in the villagers from Jalka to adopt renewable energy and has contributed to increase the comfort of student who were earlier studying under immense physical stress and has increased their access to educational media and information.

Greenpeace believes that reforms in the energy sector would require nothing short of an Energy [R]evolution. To ensure that everyone has access to quality power and a planet that can sustain future life on it.



Above: "Our village was made famous in Parliament by Rahul Gandhi and still nothing had changed. Electricity when we need it has remained just a promise. I have witnessed how easily this solar panel was set up in just 3 days." said Sarpanch Anusuabai Kumbhre
Photo: Greenpeace/Peter Caton

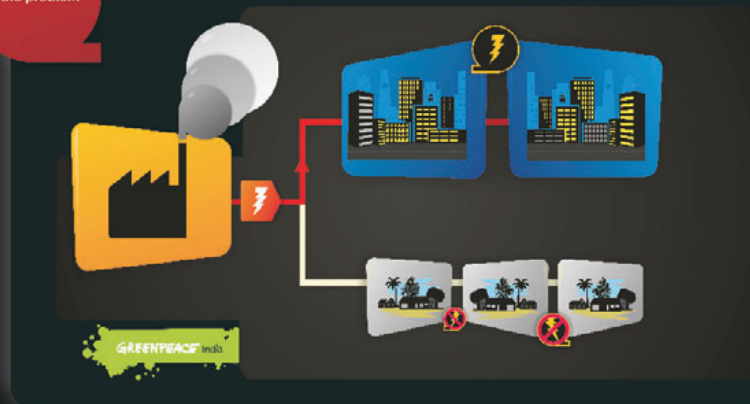


Left: "Now my children have a future" said Kalavati, Jalka's most well known resident whose two daughters and two sons are among the 100 children who experienced accessible and reliable solar power.
Photo: Greenpeace/Peter Caton

Electricity for all by 2012 is a vision which can only be fulfilled by decentralised renewable energy systems. Decentralised power would enable people to become active producers rather than just being passive consumers. Rural citizens of India would have the opportunity to satisfy their energy requirements.

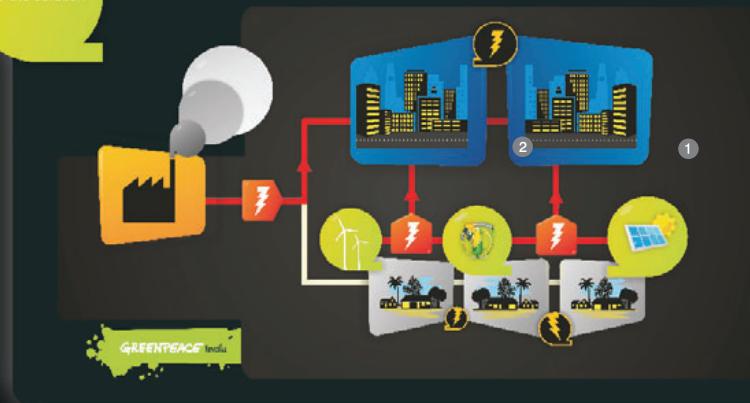
Currently cities get priority access to electricity while villages are left in the dark.

1 the problem



With decentralised renewable energy, needs of rural India would be prioritised and they can become 'providers' of energy.

2 the solution



Decentralised Renewable Energy System

Greenpeace believes that India needs to

Enact a Renewable Energy Law by 2010, with progressive Renewable energy uptake target of 15% by 2012 and 25% by 2020.

Incorporate decentralized planning with respect to production, distribution, and transmission of power through renewable energy.

Create regulatory and institutional mechanisms for not just access but provision of 'electricity to all' through renewable energy.

The Media on Renewable Energy

Dalit village Jalka tastes electricity for the first time Rahul's Kalavati dumps nuclear dream; chooses solar power

Aditi Tandon, Tribune News Service

New Delhi, April 3

Rahul Gandhi might just have to rewrite his energy security script, with the protagonist of his story choosing to look the renewable way. News is that Kalavati Bandurkar, whose story the MP had so forcefully narrated in the parliament last July for drawing a connect between poverty and nuclear energy, yesterday welcomed the arrival of clean and reliable energy into Jalka, her village in Vidarbha, Maharashtra's suicide belt.

So far, the celebrations are limited to two village schools, where solar panels have been installed to power 10 fans and a computer. These are schools Kalavati's sons attend; they will no longer have to sweat through study sessions, thanks to Greenpeace energy campaigners, who have shown that Kalavatis of India need not wait 15 years to taste the rural electrification. Solar power can deliver the dream much sooner.

"Rahul Gandhi had a nuclear energy dream for Kalavati. But the point we are making is different. One need not wait for 15 years for a nuclear power plant to be installed and electricity to land in remote areas. Three days are enough," Vinuta Gopal, Greenpeace' activist yesterday told The Tribune, advocating decentralised power through mini-grids in villages. Right now, 78 million rural households are without electricity; they need not wait for nuclear energy to get their share of power.

That's precisely the message Jalka's most famous resident gave. "Now my children have a future," said Kalavati, whose two daughters and two sons are

among the 100 children to experience accessible solar power today. In a village that goes without power for 12 hours at a stretch, solar power has come like the proverbial "whiff of fresh air".

Children are so excited; they want Rahul Gandhi to visit their village and see a schools that has fans. Village sarpanch Anusuabai Kumbhre when contacted on the phone, told The Tribune, "Rahul Gandhi made our village famous by referring to it in the Lok Sabha. Yet nothing changed for us. Electricity when we needed it remained a promise. I have now seen how easily the solar panel can be set up. We heard Rahul Gandhi will be in Wardha from today. I invite him to Jalka to take the solar vision forward."

So far, 1200 residents of Jalka have voted for the renewable energy option by signing a poster prepared by school children demanding complete solar energy in the village. Greenpeace campaigners who made the dream come true for villagers said, "We want to challenge the political class to think beyond the tested and failed attempts, at rural electrifications. Time has come to look at every citizen as an empowered producer of electricity and not just a passive beneficiary."

The message comes at a time when political parties are promising electricity for all by 2012 but not saying how to achieve it. Centralised grid with coal fired power plants won't be able to deliver the promise. "Bulk electricity gets diverted to cities which get priority for supply; villages which are in the last of the line of the grid don't get electricity," says Maitree Dasgupta of Greenpeace.

The solution is to have a dedicated grid in the form of decentralised generation for a set of villages.

Policy recommendations

India can **continue with ambitious gdp targets** while embarking on a de-carbonisation track by **adopting fundamental changes** in its energy policy.

Enact a Renewable Energy Law with time bound legal targets for RE uptake both at the grid, and at stand alone level, in every state as well as at the nationally. The proposed time bound RE uptake targets are:

- 10% by 2010
- 20% by 2020
- 60% by 2050.

The law should provide incentives for investment in RE technologies such as offering preferential tariffs, open transmission as well as incentives for buying green energy.

- An immediate shift in subsidies from fossil fuels to renewable energy.
- National feed-in-tariffs for renewable energy, without a cap.
- Incentives for rooftop solar photo-voltaics, the feed-in-tariff is made applicable even for small quantum of excess supply to the grid from the buildings.
- A national trading scheme wherein States are encouraged to promote generation of renewable energy in excess of the State standards, for which certificate are issued and which may be tradable amongst other states which fail to meet their renewable standard obligations.

A massive increase in the Research and Development expenditure to Solar by a factor of 8 at the very least.

Phasing out high potential greenhouse gases is essential and extremely urgent. Hence, India needs to enact legislation that completely phases out coolants in air conditioning and refrigerating products consisting of Hydro-fluoro-Carbons (HFCs) and Hydro-Chloro-Fluoro Carbons (HCFCs) by 2009 and substituted with safer Hydro-Carbon coolants.

“

Will we look into the eyes of our children and confess

that we had the **opportunity**,

but lacked the **courage?**
that we had the **technology**,

but lacked the **vision?**”

Greenpeace International Climate Campaign

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