



उत्थान

TOWARDS A BETTER FUTURE



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Prepared for Power Finance Corporation

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“ JEEViKA, in association with TERI, has been working to promote clean energy in remote rural areas and make the beneficiaries energy self-reliant. We value this partnership for the potential it has for providing reliable energy for the self-help group members of JEEViKA.

Mr. Balamurgan D., CEO cum State Mission Director,
Bihar Rural Livelihood Promotion Society (BRLPS)



“ The Power Finance Corporation, under CSR initiatives, is supporting clean energy solutions in rural households. Through this project, 23437 poor households in the state of Bihar have been provided with solar home systems and improved biomass cookstoves to reduce the indoor air pollution and enable them with clean lighting and cooking option.

Mr. R. Murahari, GM (CSR & SD),
Power Finance Corporation Limited



THE DRUDGERY

Around 80 million people in Bihar (according to Census 2011) did not have access to electricity. Lack of clean and affordable sources of energy severely impacted health, education, livelihood and other aspects of life in rural areas. Women and small children, in particular, were exposed to smoke and indoor pollution that resulted from use of traditional stoves (chullah) and kerosene lamps, making them vulnerable to chronic diseases and reduced lifespan.



A photograph of a construction site. In the foreground, a large yellow excavator is positioned on the left, its arm extended towards the center. In the background, a multi-story building is under construction, with its steel framework visible. The sky is a clear, bright blue. The overall scene conveys a sense of new construction and development.

A NEW BEGINNING







टेरी की पहल

लाइटिंग ए बिलियन लाईव्स

अभियान के अन्तर्गत

ऊर्जा वित्त निगम (PFC)

के निगमित सामाजिक दायित्व कार्यक्रम के तहत

एकीकृत घरेलू ऊर्जा प्रणाली (IDES) का वितरण

सहयोगी संस्थान: बिहार ग्रामीण जीविकोपार्जन प्रोत्साहन समिति

गाँव : मिल्की टोला

प्रखंड: बनमनखी

जिला: पूर्णियाँ

राज्य: बिहार







RESPONDING TO THE CHALLENGE

In 2007, TERI initiated the Lighting a Billion Lives (LaBL) campaign to address the issue of indoor air pollution and replace kerosene lamps with clean solar lighting through the Entrepreneurship Model.

The Power Finance Corporation (PFC) under its Corporate Social Responsibility (CSR) has been supporting the LaBL campaign in Bihar since 2011. A total of 67 Solar Charging Stations (SCS) in same number of villages were established in Lakhisarai and Nalanda Districts impacting around 16,000 lives.

In 2014, PFC further extended support to TERI for provisioning of clean energy solutions to 23,437 households of Self Help Groups formed under the aegis of Bihar Rural Livelihood Promotion Society (BRPLS) i.e. JEEViKA. PFC's partial grant made adoption of clean energy affordable for the self help group members. TERI in consultation with the community designed the suitable technology, facilitated creation of entrepreneurs and imparted necessary training to local youth for execution of this program.

All interested SHG members were provided an Integrated Domestic Energy System (IDES), which is a solar-powered solution designed by TERI that comprises of a solar panel for charging battery to run two LED lights, a mobile charging point and a forced-draft improved biomass cookstove.

PRESENCE

WEST CHAMPARAN



- SOLAR HOME SYSTEM & IMPROVED COOKSTOVE



- SOLAR CHARGING STATION

MADHUBANI



PURNIA



KHAGARIA

NALANDA



LAKHISARAI

GAYA







In partnership with

JEEViKA

A group of approximately 15 women and several children are sitting on the ground in front of a building made of grey bricks. The women are wearing colorful saris in shades of blue, red, green, yellow, and pink. Some are looking towards the camera, while others are looking down or to the side. A few children are interspersed among the women. The building behind them has a simple, rustic appearance with a flat roof and a few pipes hanging down. The overall scene suggests a community gathering or a social service activity in a rural or semi-urban setting.



“

There is the matter of generating livelihood but what we are looking to address through this project is women's empowerment.”

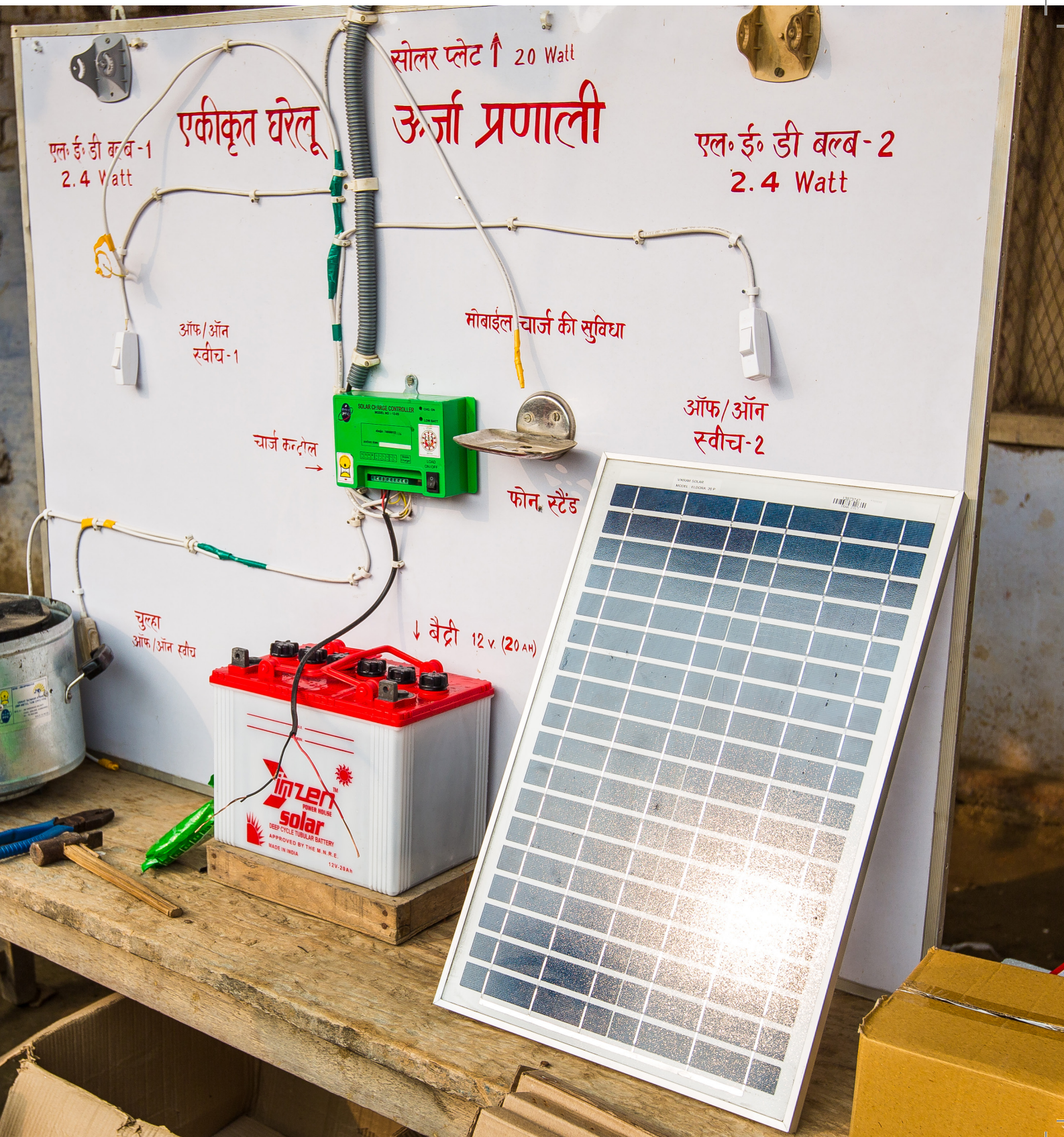
- **Ms. Archana Tiwari**, State Project Manager, Bihar Rural Livelihoods Promotion Society

“

JEEViKA is an initiative of the Bihar Government as part of its poverty reduction programme under which we focus on poor women... There was a need to give them an alternative source of energy, which JEEViKA along with TERI, was able to provide.”

- **Mr. Om Prakash Bharti**, Block Project Manager, Bihar Rural Livelihoods Promotion Society





BRINGING IT HOME

The IDES comprised of two LED-based luminaries, one mobile charging point, and a solar panel for charging a battery to run a cookstove as part of the system. The IDES needed routine upkeep to run efficiently.

The beneficiaries were made aware of the need for maintenance, proper usage of the solar panels and charging systems installed in their households. They were informed of basic do's and don'ts, such as cleaning the panels from time to time. They were advised on how long to charge their phones and turn on the light bulbs etc.





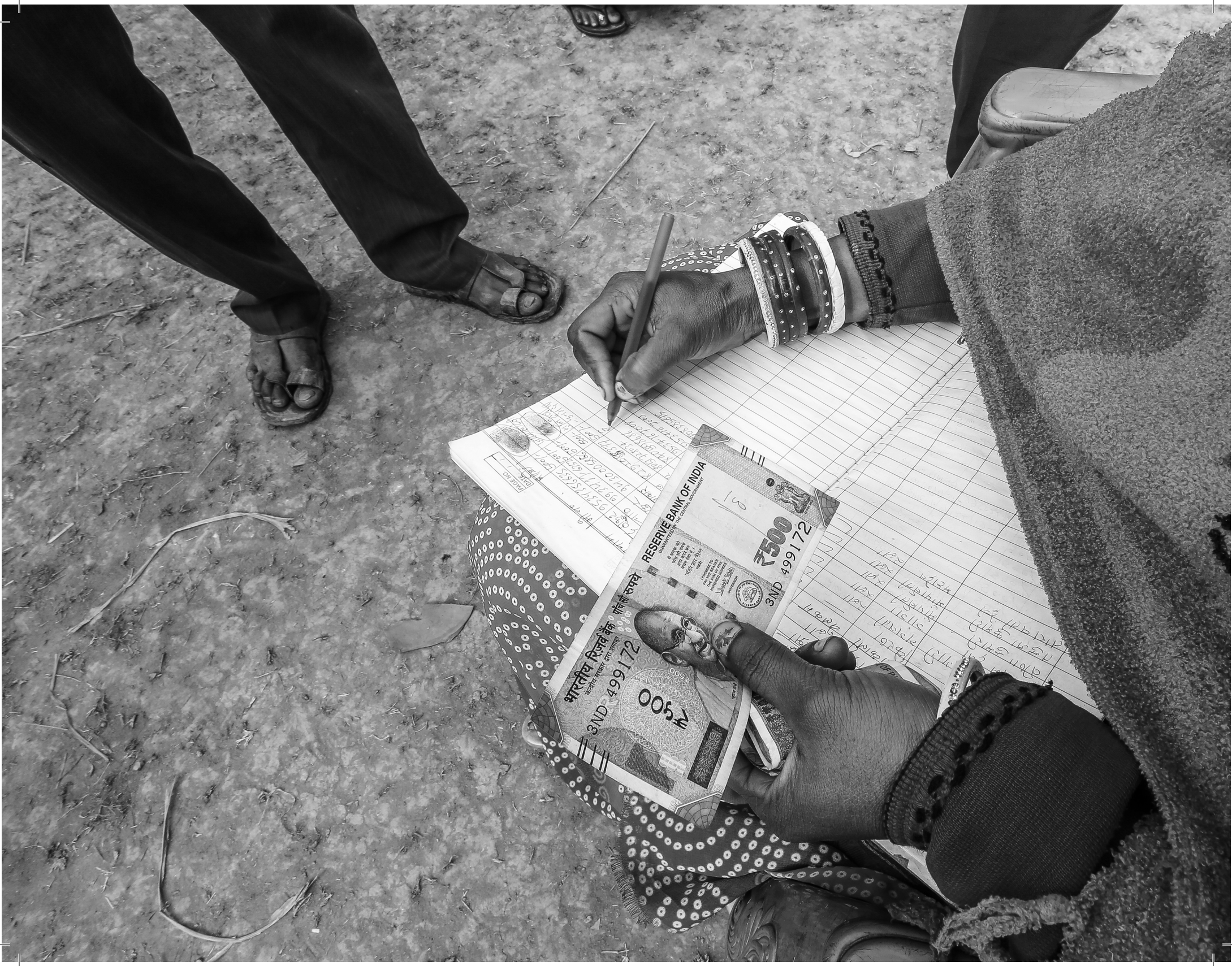
लाइटिंग ए बिलियन लाईव्स अभियान
के अन्तर्गत
ऊर्जा वित्त निगम लि. (PFC) द्वारा प्रायोजित
भारत सरकार ऊर्जा प्रणाली (IDES) उपमोक्षता प्रशिक्षण कार्यक्रम
सहयोगी संस्थान: बिहार ग्रामीण जीविकोपार्जन प्रोत्साहन समिति
(जीविका)



TOGETHER WE CAN AND WE DID

The SHGs' members were initially quite reluctant to contribute money for the IDES. They wanted an assurance of return on their money. To win their confidence, sensitisation, demonstration and training activities were organised in different villages. After understanding the benefits of the system, SHG members came forward to participate in the project.





DATE	PARTICULARS	AMOUNT
11/11/18	1000	1000
12/11/18	1000	1000
13/11/18	1000	1000
14/11/18	1000	1000
15/11/18	1000	1000
16/11/18	1000	1000
17/11/18	1000	1000
18/11/18	1000	1000
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25/11/18	1000	1000
26/11/18	1000	1000
27/11/18	1000	1000
28/11/18	1000	1000
29/11/18	1000	1000
30/11/18	1000	1000
31/11/18	1000	1000

भारतीय रिज़र्व बैंक
RESERVE BANK OF INDIA
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31/11/18 1000 1000



60% OF IDES COST
PAID BY USER

PAID BY POWER FINANCE
CORPORATION (PFC) **40%**





TAKING CHARGE

Women members trained under the project have been instrumental in addressing any small technical faults in the solar-powered system that may arise. It has also created employment opportunities for them. A call centre service has also been made available for users to lodge complaints as part of the project. It has helped increase the confidence among project beneficiaries regarding maintenance issues.







IN A NEW LIGHT

With the new system, the project beneficiaries didn't have to rely on kerosene lamps anymore. The new LED bulbs, charged by solar power, were cleaner to have inside the house and longer hours of light meant women could utilise the evening hours for income-generating activities such as sewing. What's more, this bulb doesn't attract insects, especially while cooking, the way the kerosene lamps did. The cookstoves also emit less smoke, reducing the impact on women's health and improving indoor air quality.





OPENING UP OPPORTUNITIES

Before the JEEViKA, TERI and PFC intervention, shop owners had to shut their shops by 7pm to save the expenditure on kerosene (used to light lamps). Now, they are able to keep their shops open for longer hours, resulting in more income for them and their families.





A WORLD OF POSSIBILITIES

The battery is charged during the day to light the LED bulbs in the evening, giving children more time to study, improving their performance at school. Family members can charge their mobiles for better communication with other family members.





FUEL USAGE

↓30-40%

COOKING TIME

<2Hrs.



The efficient cookstoves have substantially replaced the use of the traditional mud stoves. Women's susceptibility to respiratory illness, arising from cooking in the traditional stoves has also reduced. The new cookstoves were also found to be compatible with the fuel available at the household level, such as maize stalk, dung stick, and other fuelwood and twigs found locally.

VIKRAM SOLAR
MODEL: ELDGNA 20 P

VIKRAM SOLAR

ON THE ROAD TOWARDS SUSTAINABILITY



TECHNICAL

The technical configuration of the solar home systems were designed after extensive interaction with community members and understanding their needs. Similarly, the improved biomass cookstove has been designed keeping in view the community's cooking habits and availability of fuels at the local level.

OPERATIONAL

The Energy Entrepreneurs have been developed as vendors for the project so that continued vendor support is locally available in the shortest possible time for maintenance related services.

SOCIAL

The project delivery model has been designed in a way that the SHGs of JEEViKA own the implementation process including community mobilisation, training and continued operations.

133935

LIVES IMPACTED





SPREADING SMILES...

The government of Bihar launched seven resolves i.e. “Saat Nischay” in the year 2015 and one of the resolve envisages providing electricity connection to all households 24/7. The government of India also announced “SAUBHAGYA” scheme in the year 2017 which aims to provide electricity connection to all un-electrified households. All these efforts of the government and other stakeholders have brought a sea change in the electrification level in rural area. However, reliable electricity supply, especially in remote areas, in the evening house still remains a challenge. TERI endeavors to continue its efforts towards enabling access to affordable, reliable and clean energy services to the under-served population.

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