

2017

SEMIANNUAL

IMPACT REPORT



AN ELECTRIFYING YEAR FOR NEPAL



REFLECTING ON OUR IMPACT

Dear friends, partners,
and supporters,

2017 has been an
electrifying year for
SunFarmer Nepal.

Last year, we focused on recruiting and training an outstanding team. This year, we have worked tirelessly on achieving our mission: To provide solar energy services, creating meaningful impact in the lives of our customers through excellence in quality, innovation, and service.

The results are starting to show. In 2017, we significantly increased our portfolio of solar-powered water pumping projects. Our installations now supply more than 1.7 million liters of water daily, and irrigate over 600,000 square meters of land. We also completed Nepal's first rent to own community solar water pumping projects in Salang, Dhading and Chhatiwari, Makwanpur. The projects will provide a reliable source of irrigation to the farmers, and is expected to increase their income by up to 300%.

We also continued our work in the health sector; SunFarmer Nepal installed solar at Kritipur Hospital (100-bed community hospital), Prasuti Griha (Nepal's oldest maternity hospital), and over 22 health clinics. By the end of 2017, we will expand the Kirtipur Hospital solar PV system to produce 35% of the hospital power needs. Through our partnership with We Care Solar, we will provide solar-powered lighting and small equipment charging for over 130 remote birthing centers across Nepal. Finally, we have continued our work on one of the largest solar energy projects in Nepal – a 100 kWp installation at Bayalpata Hospital, in Achham.

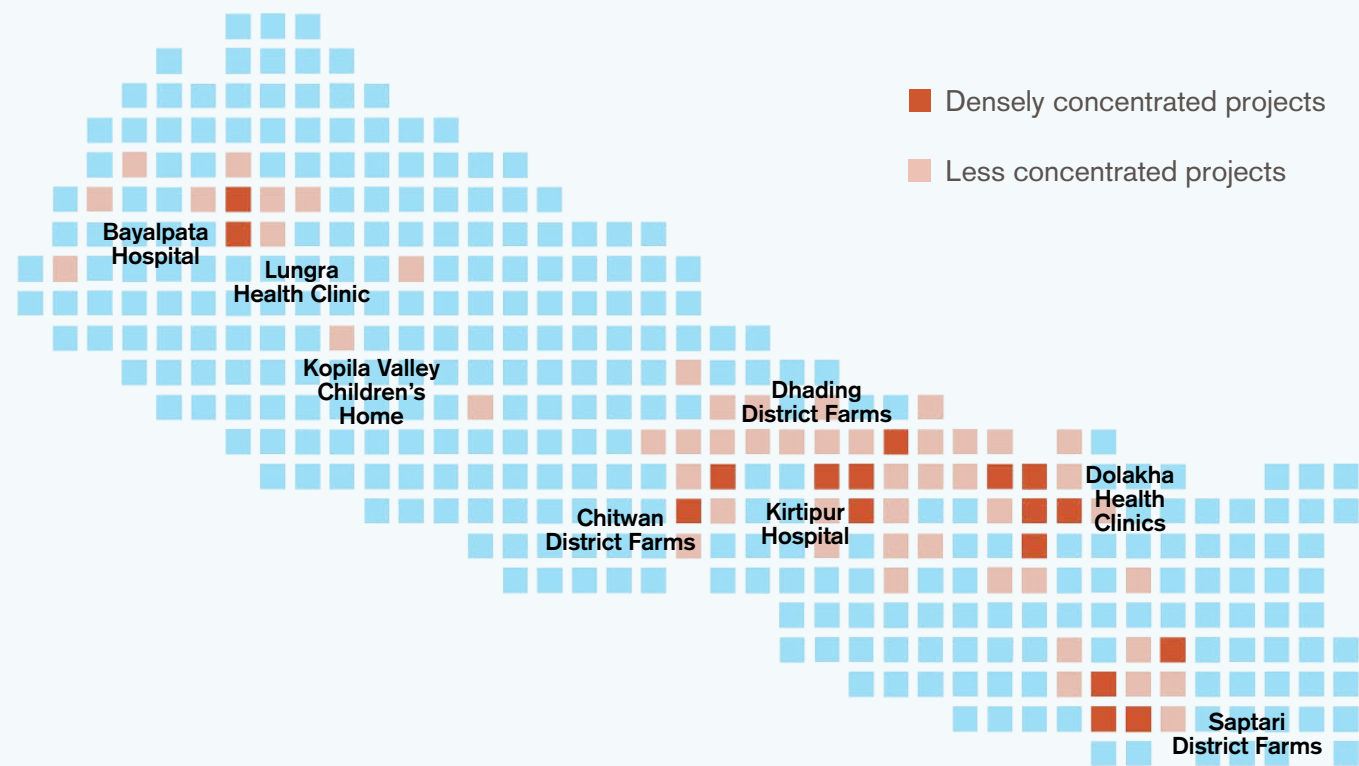
In addition to all these, we are supporting one of the top UK consulting firms to evaluate large-scale solar PV power plants in Nepal.

Finally, I would like to thank the entire team of SunFarmer Nepal for working tirelessly towards our common mission of becoming the leading solar product development company in Nepal. We look forward to another challenging and rewarding year ahead.

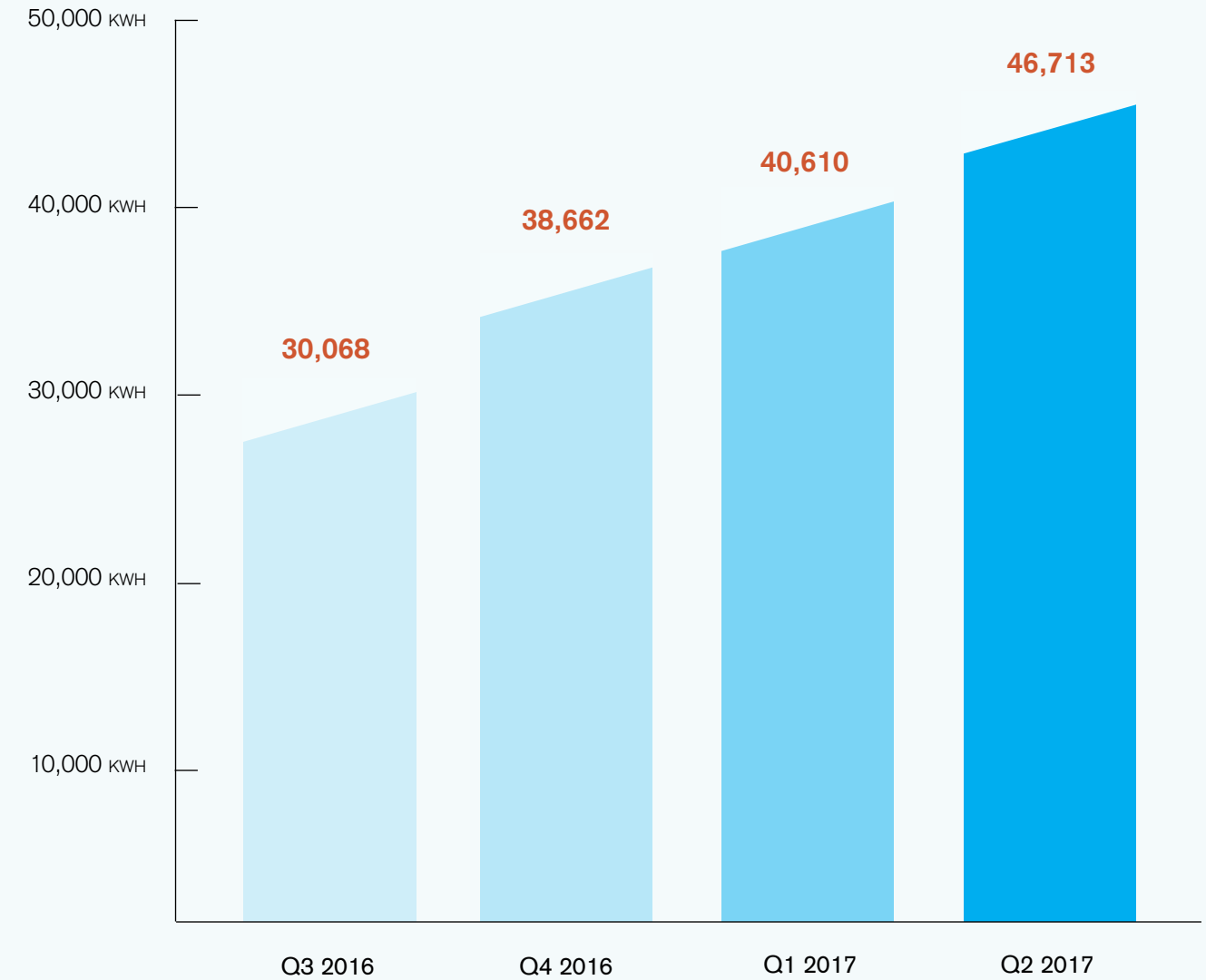
Avishek Malla



IMPACT NUMBERS



Click on different regions of the Impact Map to read more about a few of our projects on the website. The interactive project map is also found [here](#)



Electricity generated each quarter (kWh)

MISSION To provide solar energy services, creating meaningful impact in the lives of our customers through excellence in quality, innovation, and service.

HEALTHCARE PROJECTS

KIRTIPUR HOSPITAL

Kirtipur Hospital is a nonprofit community hospital established in 2006. It provides 24-hour emergency services, as well as houses a burn and reconstructive surgery ward.

For many years, Kirtipur struggled with 12-16 hours of power outages every day. In June 2017, SunFarmer Nepal installed a unique on-grid solar energy system - one of the first on-grid solar installations in Nepal.

Solar energy ensures: a 24/7 intensive care unit and 30% energy savings.

We are currently expanding the solar installation to a total of 67 kWp which covers 35% of the hospital's total energy needs. With the help of solar, Kirtipur Hospital has significantly reduced their operating expenses, enabling them to treat more patients and upgrade their services. The hospital is currently planning to expand from 100 to 300 beds.

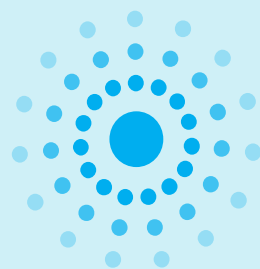


A view of Kathmandu, Nepal. For more info on this project, watch [our video](#).

OUR HEALTH PROJECTS HAVE GENERATED ENOUGH ELECTRICITY TO POWER...



16 thousand
Cesarian-section births



14.5 million
hours of hospital lights

BAYALPATA HOSPITAL

Bayalpata Hospital is located in the rural area of Achham, Nepal and treats thousands of patients using reliable solar energy to power critical, life-saving equipment.

The hospital is Nepal's first rural teaching hospital, capable of serving 75,000 patients per year. SunFarmer Nepal has signed a long-term agreement to install over 100 kWp of solar at Bayalpata Hospital.

SunFarmer Nepal has installed the first 42 kWp of a 100 kWp solar energy system at Bayalpata Hospital; when complete, this will be one of the 5 largest solar energy installations in all of Nepal.

This project is in collaboration with the US nonprofit [Possible Health](#).



An aerial view of solar panels installed by [SunFarmer Nepal](#) at [Bayalpata](#)

AGRICULTURE PROJECTS



SAPTARI FARMS

Solar water pumps currently service 20 households in the Saptari region of Nepal, helping farmers to irrigate their land. We have partnered with [ICIMOD](#) with a shared goal of providing solar pumping solutions for irrigation to farmers which results in a steady income and independence.

This project is unique because farmers are presented with different financing models:

- a) full upfront payment
- b) upfront payment plus financing or,
- c) rental model

We demonstrate innovative, scalable and replicable business models of energy delivery in energy-hungry Nepal.

Farmers no longer have to depend on diesel fuel or suffer from poor grid connection that hampers their timely crop production.



Aerial drone shot of farm land in Saptari. You can read more about the project [here](#).

OUR AGRICULTURE PROJECTS HAVE GENERATED ENOUGH ELECTRICITY TO POWER...



1.7 million

Liters of water per day for farmers across Nepal

THIS CAN BE USED TO GROW...



1.5 million

Pounds per season of cauliflower, the most common vegetable grown by farmers in Nepal

CHITWAN NATIONAL PARK

[Chitwan National Park](#) is the first national park in Nepal. It covers an area of 932 km² in Terai, the subtropical southern part of Nepal. A total of 68 species of mammals, 544 species of birds, 56 species of herpetofauna and 126 species of fish have been recorded in the park.

SunFarmer Nepal, in partnership with [ICIMOD](#), implemented a 2.4 kWp project to provide 80,000 liters per day of drinking water for the wildlife. Three easily accessible ponds are being made to store water for the wildlife which will help animals such as the elephant pictured below to easily access a water source.

These projects demonstrate the different applications of solar water pumps and show that they aren't limited to drinking water or irrigation for a community, but can be beneficial in many other places as well.



An elephant crosses the river towards the jungle in Chitwan National Park. Credit to [Don Filippo](#) for this beautiful photograph.

NOTES FROM THE FIELD



KUSHAL GAUTAM

SunFarmer Nepal's Engineering Manager

A COMMUNITY BASED SOLAR WATER PUMPING SOLUTION

SunFarmer Nepal partnered with Practical Action, an international development NGO, to implement two community-based solar water pumps in Dhading and Makwanpur districts. In Dhading, a single water pump system irrigates 3 hectares of land owned by 20 farmers. Such community-based solar water pumping systems makes water access for irrigation affordable to farmers in areas where there is no access to the electric grid.

Several groups had to collaborate to make the project a reality: Practical Action and Renewable Energy for Rural Livelihoods (RERL)/AEPC provided subsidy, the community made a modest upfront payment, and the remaining amount was financed by SunFarmer and Sana Kisan Agricultural Cooperative. In order to ensure that the project is sustainable for the long-term, SunFarmer Nepal provides a performance guarantee.

The team went through many steps to bring the project to life. First, Practical Action worked extensively with their network of local NGOs to identify potential sites. SunFarmer Nepal then conducted a site survey and prepared a detail technical report. Once the team was comfortable with the sites, SunFarmer Nepal partnered with

local cooperatives to check the creditworthiness of local farmers. These cooperatives are important partners in the project; they are responsible for timely collection of monthly payments from the farmers!

Since solar water pumping is a new technology for these farmers, SunFarmer Nepal and team spent several weeks interacting with the community to show them the technology and ensure the project had full support from the community. Once the community approved the project and the team was satisfied with the credit checks, SunFarmer Nepal installed the solar energy system! In addition, Practical Action provided training on efficient water use and agricultural methods to maximize their benefit from the solar water pumping system.

Some farmers were astonished when the system first pumped water to their tank. In most rural areas, people are mostly familiar with solar home lighting systems only, but, to see its other beneficial applications, especially in irrigation, has expanded their knowledge and confidence in the technology.



Two women in a field after a solar water pump was installed on their farm in Saptari, Nepal.



A Nepali farmer's house and crops. Taken during a site visit to Makwanpur in 2016.

THANK YOU TO OUR TEAM + SUPPORTERS



Many thanks to our hardworking [team](#) for another incredible year!

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ICIMOD

