

SoLAR IF Update

Scaling Solar Irrigation Systems Using Digital Platform and Personalized Agri-Advisory





About Gham Power

- Established in **2010**
- Started operation urban rooftop solar for households and commercial clients
- Rural operation since **2015** -- started with solar mini grid for rural electrification, first of its kind in Eastern Nepal
- Learned that **tying solar** or other appliances with **income** directly is vital -- therefore ventured into solar for agricultural sector
- Started building solar powered agro processing solutions like Solar water pump for irrigation, solar grinding mills, refrigeration and cold storage etc.
- Deployed over **250** of such off grid solar powered AP solutions

Innovation: Yield Improvement in a Box!



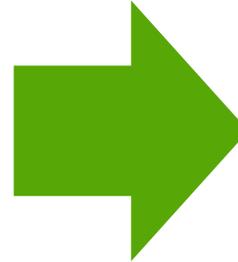
**Solar Water
Pumps**



**On-the-Spot
Direct Financing**



**Data-Driven
Crop Planning**



**Increase Farmer
Yield, Income ***

80%

Enabled by our proprietary digital platform built for project development, monitoring, and automating agro-advisory services for precision farming

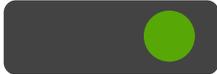
* In 3 years or less

Work Package 1:

Stakeholder Training & Onboarding

Includes training and onboarding of partners - from Micro Finance Institutions and Government Agencies
Past 3 Months: Review of Standard Operating Procedure with MFI partners → **Pilot of Improved SOP**

Activities on this Work Package [Ongoing and Implemented]



Field Trips - 3 Branches



Field Staff and Agent Trainings - 12 events, 30+ staffs



Development of Materials for marketing, education and awareness - 6+ audio/visual items



Development of revised android and web-application to support the improved Standard Operating Procedure



Sales Training Workshops for MFI staffs and agents

Work Package 2:

Enhancing Personalized Agri-Advisory

Includes - testing and refinement of hardware, optimization of software algorithm and advisory database, and integration of improved hardware and software

Activities on this Work Package [Ongoing and Implemented]



Test and calibration of new sensors

- Water Level Sensor
- Water Flow/Discharge Sensor
- Dissolved Oxygen Sensor



Develop and expansion of crop and advisory database

- On-site piloting of Smart Agri Meter to refine crop database for
 - Tomato, Strawberry, Broad Leaf Mustard, Mushroom



Integration of the sensors into the digital platform and optimization of algorithm



Testing and Validation of Gham Power Krishi Meter

Work Package 3:

Impact Measurement & Validation

Involves partnering with the Alternative Energy Promotion Center APEC and other government agencies to test and validate the impact of Yield Improvement Solution among existing farmers.

Activities on this Work Package [Ongoing and Implemented]



Partnership with
APEC



Obtain list of 10 potential sites to pilot and test the Yield Improvement Solution



Deploy Gham Power's Yield Improvement Solution at the pilot Sites



Finalize Key Performance Indicators for Partners (MFI, APEC, other)



Develop Continuous Impact Measurement (CIM) Platform (app) for the Farmers

Work Package 4:

Market Activation

Includes display of the technology, services and the benefits for the end users through live demonstrations and user testing.

Activities on this Work Package [Ongoing and Implemented]



Field Demonstration of the SWP systems and Agri Sensors - 3 sites planned in March



User testing and demonstration of Off Grid Bazaar digital platform for AEPC



Monitoring, Evaluation and Knowledge Sharing



Staff Login

Phone Number

Password

Login

[Forgot your password?](#)



Select the type of Lead

300 Total Leads	125 Valid Leads
15 Closed Leads	125 Invalid Leads

All Leads

- Sharmila Kumari Tharu**
Status: Unfiltered
- Sharmila Kumari Tharu**
Status: Potential
- Sharmila Kumari Tharu**
Status: Rejected



Mobile App to register farmers through MFI Agents





Janautthan Samudayic Laghubitta Bittiya Sanstha Ltd.

Overview

- 25 New Leads
- 15 Immediate Leads
- 35 Possible Leads
- 6 Hot Leads
- 2 Closed

Lal Jhadi

- 25 New Leads
- 15 Immediate Leads
- 2 Hot Leads

[Visit Branch](#)

Lal Matiya

- 25 New Leads
- 15 Immediate Leads
- 2 Hot Leads

[Visit Branch](#)

Parsatikar

- 25 New Leads
- 15 Immediate Leads
- 2 Hot Leads

[Visit Branch](#)

Recent Leads

Name	Contact No.	Time Created	Agent	Branch	
Sharmila Tharu	9856325689	5 minutes ago	Anish Shrestha	Chandrauta	View Lead
Sharmila Tharu	9856325689	5 minutes ago	Anish Shrestha	Chandrauta	View Lead
Sharmila Tharu	9856325689	5 minutes ago	Anish Shrestha	Chandrauta	View Lead

Web application for lead follow up management

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Learning & Challenges



COVID - still an issue, MFI partners are focused on recovering the pending payments

COVID - Supply chain will still take some time to return to optimal operation



Partnership development with government institutions is a time intensive process



Farmers could use immediate help -- perhaps through synergies with other institutions and businesses (seed bank, marketplace of agri inputs like fertilizers, pay as you grow - innovative financing instruments)

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Next Steps

Next 6 months



Implementing and Replicating -- Improved Standard Operating Procedure -- 3 branch to 10+ branches



Deploy and gather preliminary data from 10 pilot sites with AEPC



Complete testing and integration of 3 new agri-sensors in the digital platform



Complete field demonstration, training and agri-workshops for minimum 50 staffs and 200 farmers



Thank You

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