

1.2 + Billion people live in Darkness.

Husk Power Systems

Manoj Sinha

Co-Founder and CEO



Impact Created in 5 Years



Lighted 20,000 Households



Employed 375 rural people; 75 rural women employed and trained



17 Franchisee partners; Income generation of Rs. 45,000 / month



Saved rural households Rs. 3 Cr/year



Saved 15,000 tons of CO₂ per year

Vision

Enable socio economic development by providing “on-demand” affordable power

HPS Accomplishments

A leader in providing renewable power using de-centralized mini/micro grids

- ❖ Six years of experience in managing mini-grids in rural areas
- ❖ HPS currently manages over **70** plants that provide electricity to over **250,000** people spread across **350** villages
- ❖ Established strategic partnership with Shell Foundation and IFC Advisory for establishing **Husk Power University (training program)**
- ❖ Launched **franchise model** and have 17 franchise partners
- ❖ Global company with footprint in India, Nepal, Uganda and Tanzania
- ❖ Named one of the six companies (along with General Electric) as **founding members for President Obama's Power Africa Initiative**

Recruited a Silicon valley veteran,
Brad Mattson, as the Chairman of the Board

Key Management Team

World class management team to scale up the company



Manoj Sinha: Co-Founder & Chief Executive Officer

Brings 15 years of experience as an Executive at Standard & Poor's, USA; Worked as a Sr. Director, Risk Management and managed teams at Intel B.Tech from IIT; MS in Electrical Engg and MBA in Finance from the USA



Col. Baljit Singh: Chief Operating Officer & Country Director, India

Brings 26 years of experience working in various executive positions; most recently as General Manager Ops at Suzlon Energy and Chief Commanding Officer in Indian Army managing a team of 800+ people M.Tech in Electronics; MBA in Operations from IIM-Ahmedabad

Abhishek Agarwal: Vice President, Finance

Brings 17 years of experience; Worked as a Head of Finance at a publicly traded company, Managed financials for Rs. 500 Cr annual turnover company



Surajit Das: Director of Sales & Marketing

Brings 13 years of Marketing Experience; Worked as a Senior Manager of Sales at Reliance Communication to increase market share etc. B.Sc in Physics and MBA from BIT Meshra

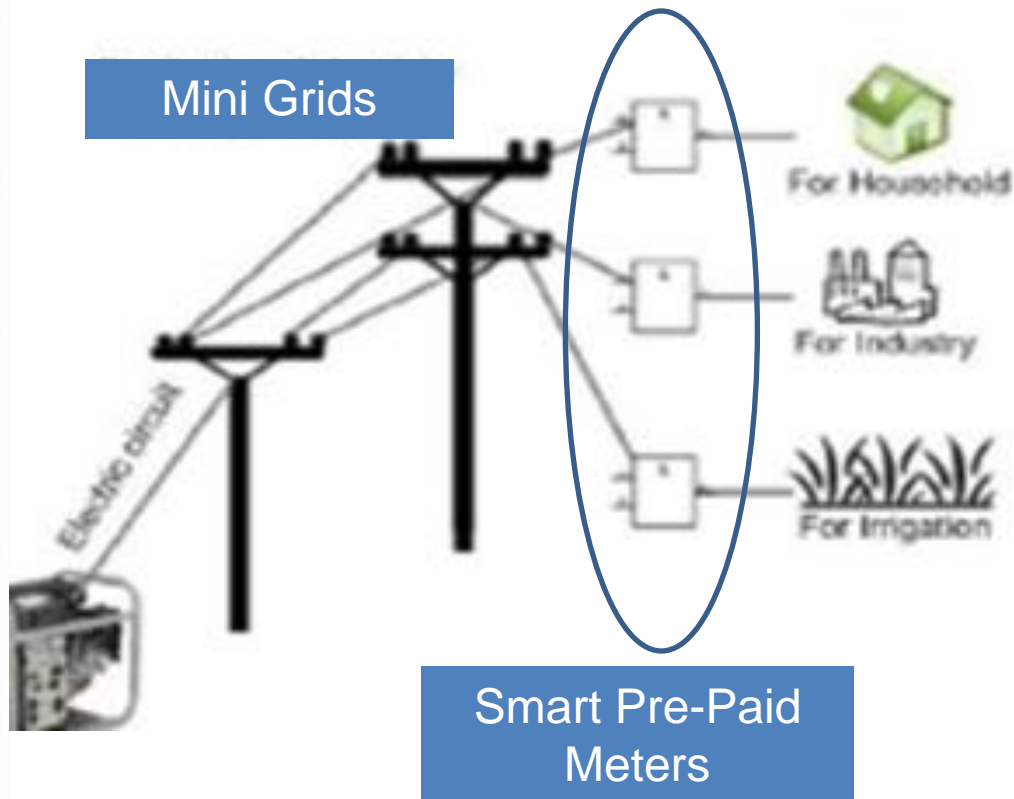


Bijit Biswas: Director of Solar Engineering

Brings 12 years of Engineering & Management Experience; Led multi-functional teams as a Sr. Technical Lead to develop financial transactions software. B.Sc in Electronics and PG from Symbiosis, Pune University

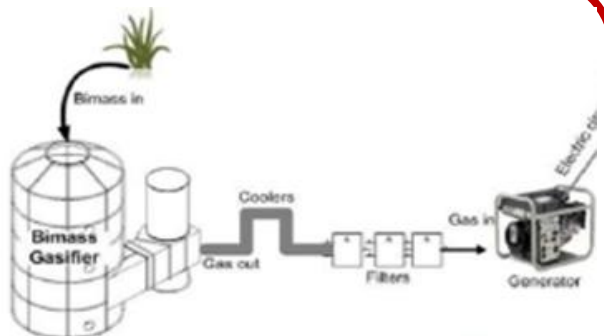
Managing Mini-Grids and Communities

Three Phase AC Mini Grid where wires extend ~1.5km and DC Micro Grid where wires extend ~300m



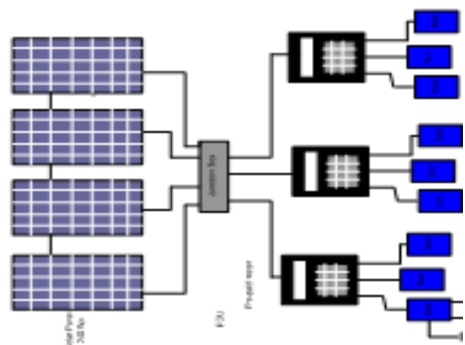
- ❖ *Build and Wire the village*
- ❖ *Pay-as-you-Go System*
- ❖ *Recruitment and Training*
- ❖ *Maintain the network*
- ❖ *Education*

Technology that Powers HPS Mini and Micro Grids



Biomass Power Plant

- ❖ **Biomass System:** World's lowest total capital cost per kW
- ❖ **Proprietary System:** HPS designs its own gasifiers and transmission network
- ❖ **Breakeven:** Low CapEx results in a 4 years breakeven period

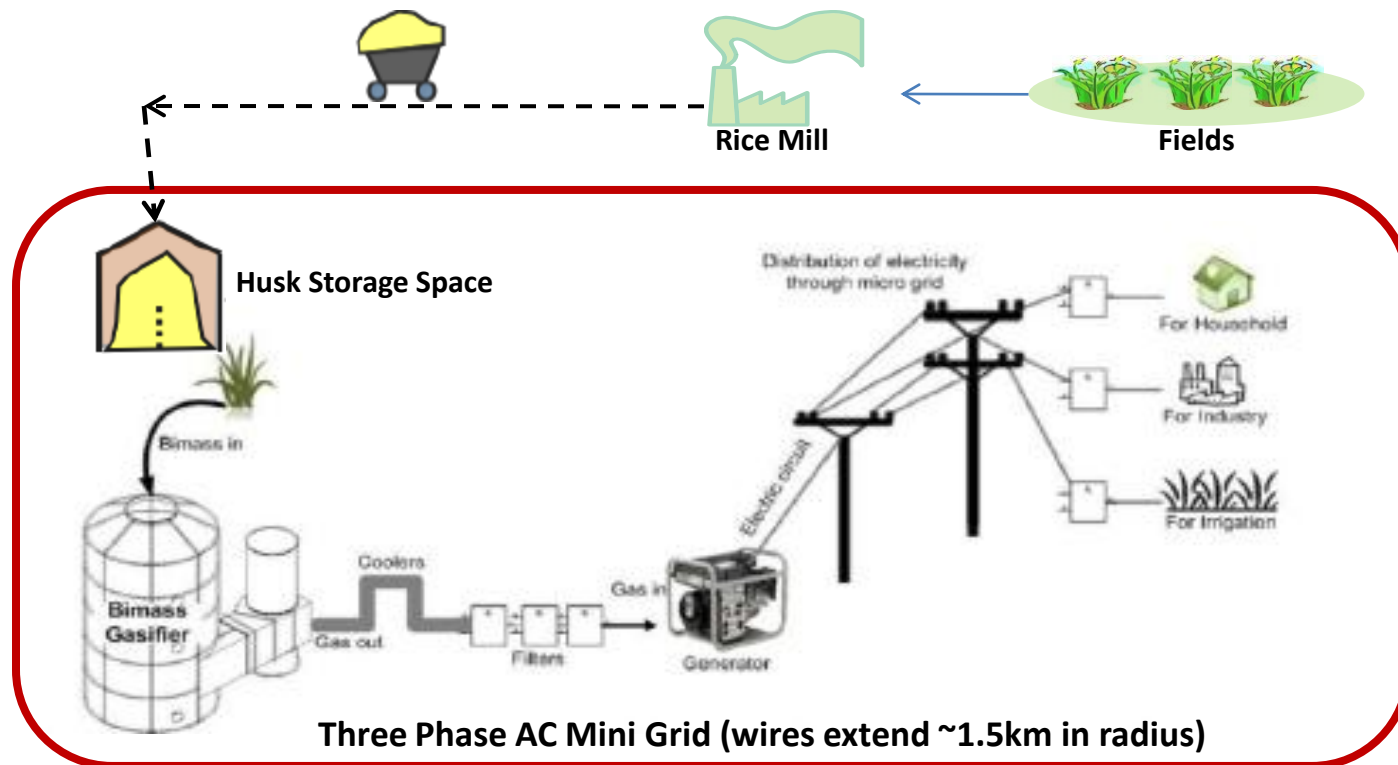


Solar PV Power Plant

- ❖ **Solar Micro Grid:** HPS connects ~20 households per micro-grid
- ❖ **Proprietary System:** HPS has designed world's lowest cost smart pre-paid meter
- ❖ **Breakeven:** Low OpEx results in 5 years breakeven period

Biomass Powered AC Mini-Grids

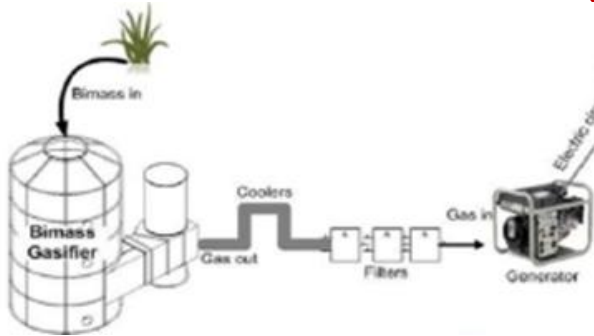
Proprietary System with Low CapEx for providing three phase AC power



World's lowest cost providers of biomass based renewable energy equipment.

Hybrid Model to Enable “On-Demand” Power

Solution for 12+ hours of power at the same CapEx as Solar AC



Biomass Power Plant



Solar PV Power Plant

- ❖ *Low CapEx Biomass for nighttime*
- ❖ *Low CapEx Solar PV panels (without battery) for daytime*
- ❖ *Provide 12+ hours of power*
- ❖ *Power Cold Storage and Agro Processing mills*
- ❖ *High level of training required*

AC Mini Grid (wires extend ~2 km in radius)

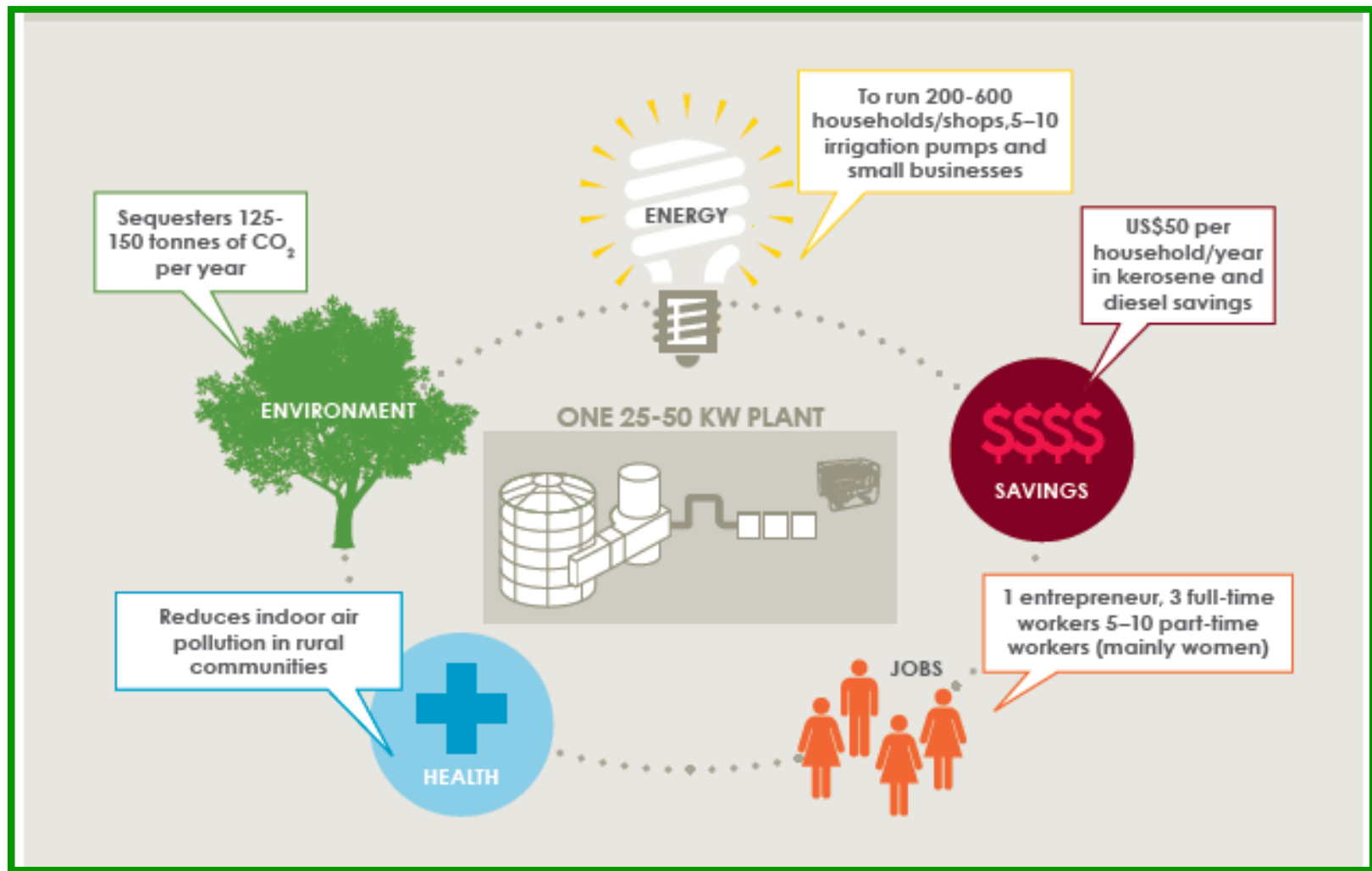


HUSK
POWER SYSTEMS
हरक
गुणवत् बिजली
तमसो मा ज्योतिर्गमय

VENTURY BOX

HUSK
POWER SYSTEMS
हरक
गुणवत् बिजली
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Development Impact



Women Working on Incense Sticks



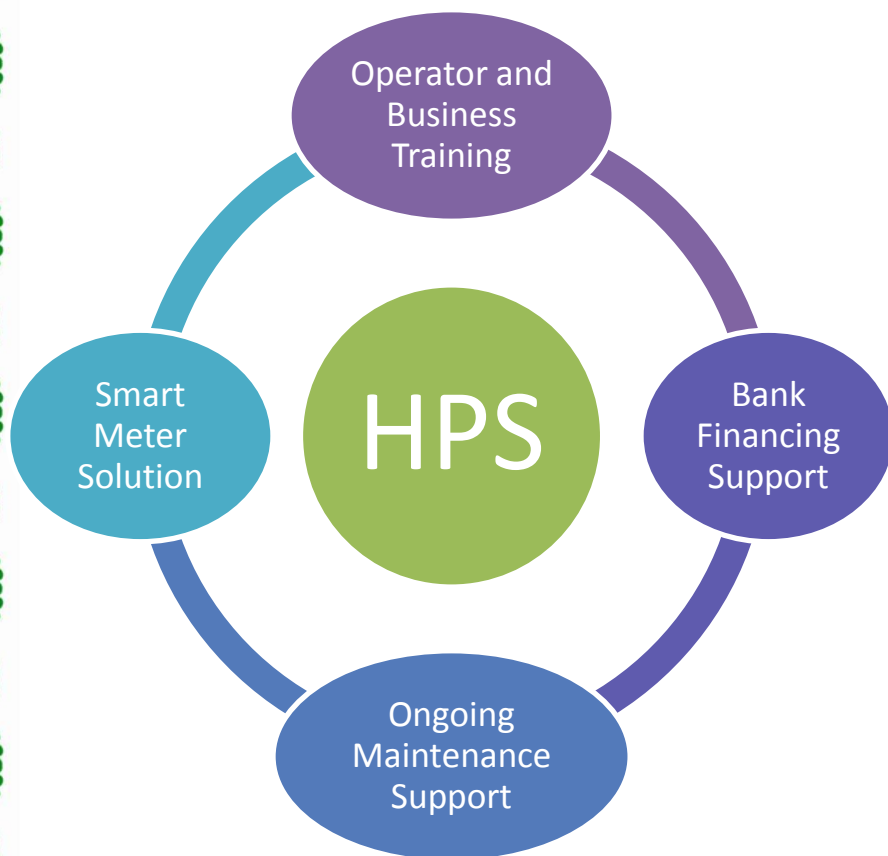
Training – Technicians and Mechanics



Scaling Biomass Power Plants

Enabling Franchisees

Equipment sales with training and ongoing maintenance services



Franchisee Partners Program

- ❖ Select entrepreneurs and assist with Bank Finance
- ❖ Train owners on basics of finance and process management
- ❖ Train their operators and mechanics
- ❖ Build and wire the village
- ❖ Provide maintenance and business support for ongoing fee

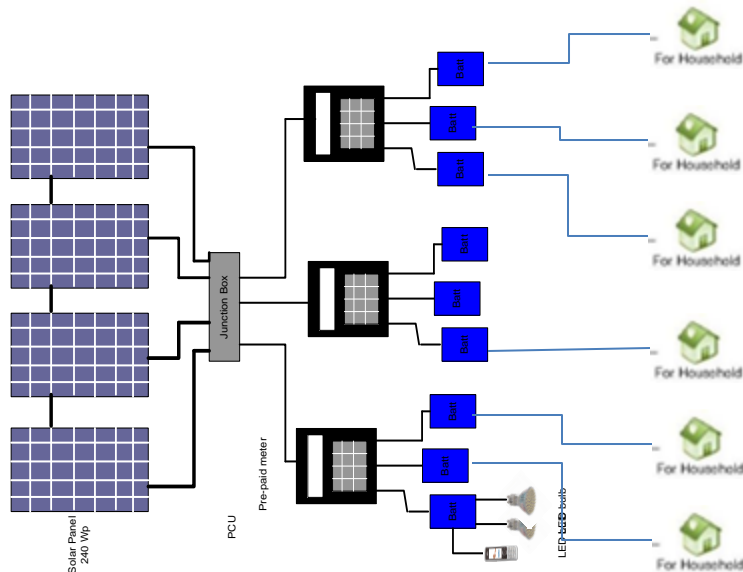
Current – Successful BM Partners profile

- « Has a good family background and is a influential member of community
- « Is typically a male between 30-45 years
- « Possess experience of running small businesses
- « Has relationship with local banks
- « Is diligent and hard working and does not hesitate to get hands dirty
- « Experience with operating diesel genset is a plus
- « Entrepreneurs who run small agro processors are relatively more successful
- « Partners operating HPS system in market areas (small shops etc) generate higher sales and has less hurdles in collecting money from customers

Solar PV Micro Grids

Smaller Villages- Opportunity for Solar DC Micro Grid

Less affluent villages need power only for lighting and cell phone charging



- ❖ *Connected 2,500+ households*
- ❖ *Reduced complexity*
- ❖ *Less labor with more skills*
- ❖ *Less potential for theft*
- ❖ *Higher CapEx – 2.5x Biomass*

DC Micro Grid (wires extend 300m in radius)

Scaling Micro Grids – Solar PV

Focus on Organic expansion with Solar PV by keeping OpEx very low

- ❖ Invested resources for establishing ~2,500 connections
- ❖ Built a proprietary low-cost business model for delivering DC power
 - Leveraged five years of mini-grid management experience
 - Utilized in-house electronics engineering talent to design solution
- ❖ *Established partnership with **First Solar** to scale this business to 100,000 households in four to five years*

Awards and Partnerships

World Class Partnership

Partnerships across the spectrum enabled HPS to build a scalable platform



LGT Venture Philanthropy



Husk Power Awards & News



FAST COMPANY

“2008 Social Enterprise of the Year”



“Most compelling idea to change the world.”



THE TIMES OF INDIA
Powered by India



The Economist

“2010: Power to People”



**The Ashden Awards
for sustainable energy**

“2011 International Winner”



The New York Times



FOX BUSINESS



Forbes




THE ASPEN INSTITUTE

THANK YOU

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