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 CO$_2$ per year
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

Mini Grids

Smart Pre-Paid Meters
Technology that Powers HPS Mini and Micro Grids

- **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 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

- 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)
Development Impact

Sequesters 125-150 tonnes of CO₂ per year

ENVIRONMENT

To run 200-600 households/shops, 5-10 irrigation pumps and small businesses

ENERGY

US$50 per household/year in kerosene and diesel savings

ONE 25-50 KW PLANT

SAVINGS

Reduces indoor air pollution in rural communities

HEALTH

1 entrepreneur, 3 full-time workers 5-10 part-time workers (mainly women)

JOBS
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.
Husk Power Awards & News

“2008 Social Enterprise of the Year”

“Most compelling idea to change the world.”

“2010: Power to People”

“2011 International Winner”
THANK YOU

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