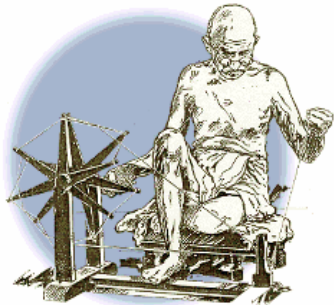


The Energy Access Nexus: The Multiplier Effects
of Energy Access to Meet Community Needs

Solar Garment - Business Model and Current Status

Presentation by



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Wardha, India

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19th century was marked as an Era of industrial revolution where maximum thrust was given on the mechanization, automation, productivity and luxury of life leading to Urbanization.

Is there any need for New Era Industrialization concepts for sustainable green development ?

YES



Why?

Industrial Revolution as of now had a little concern on the approach **towards environmental issues**

to create **sustainable employment generation** through women empowerment in the rural sectors

less employment avenues and high level of **drudgery with low productivity and non-global competitiveness**

global warming and heavy urbanization are big problems

How?

Adopt **technologies and systems which could support sustainable industrial activities** in the rural areas

Empowering women to apply **clean/green energies** for **sustainable employment generation** activities

introducing **sustainable decentralized technologies** and automation in the form of **Man-Machine systems coupled to RE sources**
innovation, awareness and implementation of quality practices for rural industries **to produce globally competitive products**

AIVIA to MGIRI: A Distinguished History

1934 : Gandhi initiated All India Village Industries Association (AIVIA)

Prominent Scientists and Technologists, leaders in public life and industry became advisors to contribute towards Rural Industrialisation and great Gandhian stalwarts such as Dr.J.C.Kumarappa and others substantially contributed in this direction during the initial phase.

1956 - 57 : Jamnalal Bajaj Central Research Institute (JBCRI)

AIVIA is renamed as JBCRI after the establishment of Khadi and Village Industries Commission (KVIC) in the same place to promote Rural Industrialisation through innovative S&T inputs in KVI sector

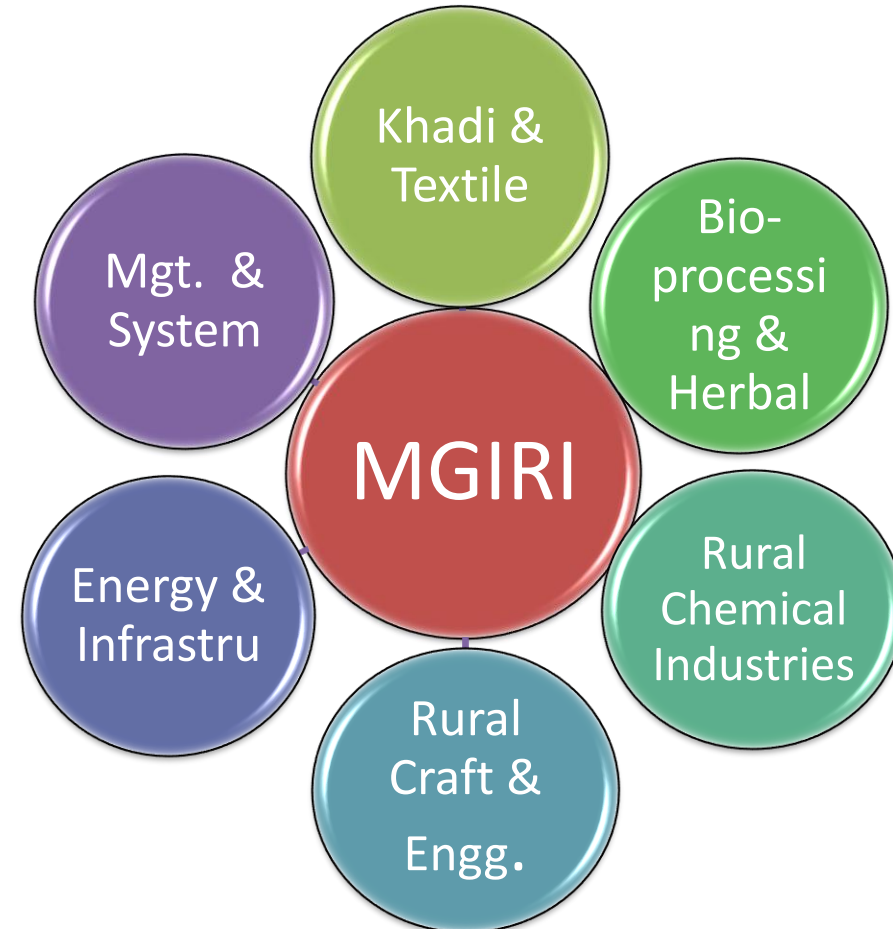
2008: Mahatma Gandhi Institute for Rural Industrialisation (MGIRI), Wardha

An outcome to cope with the changes and challenges of the nineties. This was a revamping process done by the collaborative efforts of KVIC and IIT Delhi as a National R&D Institute for accelerating the movement of Rural Industrialization in India under the Ministry of MSME, Govt. of India

MGIRI

VISION

To **accelerate** the process of Rural Industrialization in the country along the lines of Gandhian vision of **sustainable and self reliant village economy** and to provide **S&T support** to **upgrade the products** of rural industry so that they gain **wide acceptability** in the **local and global markets**



Rural Energy & Infrastructure Division, MGIRI

Innovative Implementation of Decentralized Solar Applications for Rural Industrialization

HOW?



Selecting the Industrial Segment that can be implemented in Rural Sectors.

Optimizing the power requirements through redesigning, segmenting and scaling down process machineries for Solar application to justify the internal rate of returns (IRR).

Decentralized solar applications by coupling suitable DC drive systems to the above process machineries.

Utilizing the locally available Solar energy resources to provide sustainable employment round the year.

Innovative Decentralized Solar Applications for Khadi & Textile Industry Rural Sector in India



Solar Charkha Individual Enterprise Business Model in Khadi Sector and implemented in the Six KVIC Zones of the country
-Lakhs of Poor Lady Spinners to double their income without drudgery-



Solar Garment Business Model Evaluation Report conducted by GIZ – MNRE based

Under a collaborative **Indo-German program (IGEN-RE)** of German International Agency, Govt. of Germany (GIZ) and Ministry of New & Renewable Energy, Govt. of India (MNRE) have conducted study on the new business model development possibilities of decentralized solar application in garment manufacturing. A market research agency MART was assigned the responsibility of the survey and the report submitted have indicates two-three possible Business Models for sustainable income and employment generation in the rural sector for India and the world.

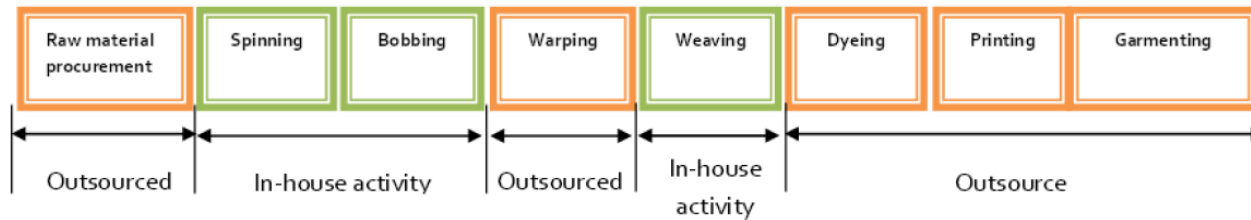


Proposed Business models

Business Model 1

This model can be applied on any existing charkha or loom for producing the solar garment at very low power consumption. The major purpose of developing the solar charkha and loom is to reduce the drudgery among the spinning and weaving community

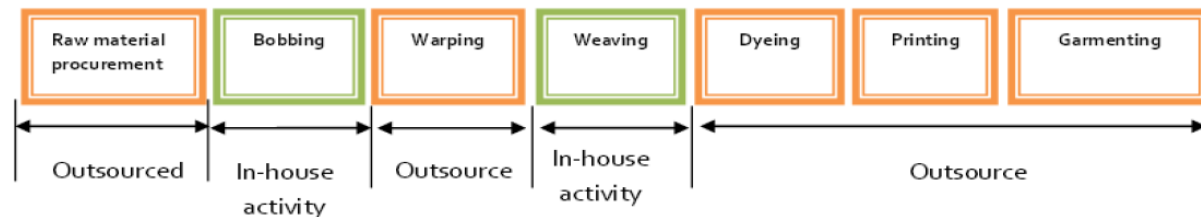
The Production Process: Cotton to Cloth Value chain



Business Model 2

It is all about the use of solar technology on looms. This model has been derived from an understanding of creating a business opportunity for the entrepreneur who wants to set up this technology particularly on loom and can earn the profit.

The Production Process: Cotton to Cloth Value chain



**Solar Charkha Cluster
implementation in 11 Blocks of
Amravati District of M.S. for 220
Women from Backward class**



**Solar Charkha Cluster for 500
Women at Navada, Bihar**



**Hon'ble Prime Minister appreciated Solar Charkha Cluster in
'Maan Ki Baat'**



Solar Garment Unit (Ashti Model)



Solar Spinning



Solar Powered Weaving



Solar Bobbin Winding



Solar Powered Garmenting

Solar Powered Loom Business Models



Solar Garment Business Models implemented at various places in the country

Solar Garment Unit at Seloo – Magansangrahalay Seva Samitti



Solar Garment cluster at Hubli, Karnataka



Solar Garment Unit in Gondal & Rajkot, Gujarat



Solar Garment Unit at Auroville, TamilNadu



Web linkages

Solar Garment :

<http://www.youtube.com/watch?v=Q5UCDo4j7jE>

Solar Charkha:

http://www.youtube.com/watch?v=cP7fT_IdDUI

<https://www.youtube.com/watch?v=SAnNMcsAZRs>

<https://www.youtube.com/watch?v=qN0D10VKMgA>

https://www.youtube.com/watch?v=sJbrEr_-w0k

<https://www.youtube.com/watch?v=xed6hNkCOSU>

https://www.youtube.com/watch?v=X3-X_vb9WtM

<http://www.newsnation.in/videos/india/news-items-8/19979>

<https://www.youtube.com/watch?v=-29m3XPjTm>

http://www.business-standard.com/article/current-affairs/khadi-charkha-goes-solar-115102600014_1.html

<http://timesofindia.indiatimes.com/city/jaipur/Modi-lauds-two-women-from-Raj-in-Mann-Ki-Baat/articleshow/50802148.cms>

LED light training in Prisons:

<https://www.youtube.com/watch?v=s6Y0hzROvuA>

<http://punemirror.indiatimes.com/pune/civic//articleshow/50799097.cms?>

Thank You