

CII GREENCO Plant Visit-Marico Limited, Baddi



16th December 2017

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Marico Portfolio : Beauty & Wellness





Hair Care

- Healthy refined edible oils
- Oats

Male grooming/ styling

Hair Nourishment

- **Deodorants**
- Hair Creams/Gels/Wax

Skincare

Body Lotion









Marico is a ~6000 Cr Turnover Indian MNC, with presence in Beauty and Wellness

Making a Difference for 25 years

The World of Marico



Coconut oil brand in the world -Parachute

18% topline CAGR growth since inception

95% of our portfolio enjoys market leadership (No.1 or No.2)

7.5 Crores

1 out of every 10 coconuts grown in India is used by Marico

countries present in

across emerging

25+

markets

26% bottomline CAGR growth since inception 10 acquisitions in 10 years

Indians' lives are touched

25%+

since listing

by Marico

total shareholder return

1 out of

every 3

80%

>20,000 population town mostly covered by Marico's distribution network

7.5 Crores

4.6 Million retail outlets serviced by nationwide distribution network

Market Leadership: Key to Category Choice

Brand	Category	Indicative Market Share (%) #	Rank
Parachute/Nihar	Coconut Oil (India)	~ 57%	1
Parachute	Coconut Oil (Bangladesh)	~ 82%	1
Saffola	Super Premium Refined Edible Oils (India)	~ 60%	1
Saffola	Oats (India)	~ 25%*	2
Parachute Advanced, Nihar Naturals, Hair & Care	Hair Oils (India)	~ 30%	1
X-Men	Male Shampoo (Vietnam)	~ 38%*	1
Fiancée / Hair Code	Hair Styling (Egypt)	~ 58%*	1
Set Wet / Parachute Advansed	Hair Gels & Creams (India)	~ 52%*	1
Livon / Silk & Shine	Post Wash Hair Serum (India)	~79%	1
Parachute Advansed Body Lotion	Body Lotion (India)	6%	5

Marico brands have a no 1 position in their respective segments over around 90% of its turnover

Master Brands : Saffola & Parachute

PARACHUTE

SAFFOLA



Purpose of Life is to have a life of Purpose

Service and December 1

Marico PURPOSE

Only when you're Empowered do you Rise above the task at hand and take complete ownership

to

"Make a Difference"!

Responsible Corporate Citizen

Marico Innovation Foundation



- Marico- Make a Difference Philosophy
- Not only Shareholder Value but also

benefit all Stakeholders

- Marico Innovation Foundation
- Brands with Purpose
 - Saffola and Shanti



Marico committed to Sustainability: "Shareholder Value" and "Sustainability" go hand in hand

Marico Energy Framework



Operate business in an efficient and financially sustainable manner while satisfying our customers and creating value for stakeholders



Ensure good governance, ethics and transparency in stakeholder engagements while promoting & advocating responsible business practices



Compliance with all applicable legal, environmental & social requirements



Promote sustainable consumption while enhancing the nutrition, well-being and beauty of our consumers



Reduce the green-house gas emissions, enhance energy efficiency, promote renewable energy use and reduce waste



Integrate sustainability considerations throughout the product life cycle by institutionalizing innovation within organisation and stakeholders



Foster health, safety and well-being of employees and inculcate a culture of empowerment and enrichment



Collaborate with communities towards social interventions in the identified thrust areas



Develop sustainability Key Performance Indicators, set definitive targets and establish monitoring mechanism

3 Pivots of Sustainability

"Less is More" Reduction in GHG Gases/Carbon Footprint



- Reducing Carbon Footprint by Infrastructure Improvement and Process Design
- ISO 50001 (Energy Mgmt)and ISO 14001 (Env. Mgmt) Certifications of Mfg Units
- LEED Certification of Office Buildings

Marico committed to reducing impact on Environment

Becoming a "Responsible Consumer"



Special Focus on <u>Reduction</u> of "Energy" and "Water" Consumption

"Responsible Corporate" Citizenship





EXTENSION PROGRAM VIELDED
25%
increase in production by
adopting the correct practices

SAFFLOWER EXTENSION PROGRAM



Marico Green Journey: Accolades



9 awards/certifications have been won by MARICO in Green area since 2008

- National Energy Conservation Award (Ministry of Power)- 2008
- CII Water Conservation Award (Excellent water efficient unit) -2008
- Environmental excellence by Greentech foundation - 2009
- CII Excellence in energy Management - 2009

- Kerala State Energy Conservation Commendation Award - 2010
- Greentech Foundation Environment Excellence Award - 2010
- National Energy Conservation Award -2011
- Greentech Environment Silver Award 2011
- ISO 50001 Energy Management certification for Baddi plant 2014

Marico Sustainability Way Ahead



Our commitment to Sustainability continues

Baddi Operations



Baddi Plant at a Glance

Some Facts

- Year of Inception- 2010
 - 2nd Edible Oil Plant of Marico
 - Strategically located near Source and Market-Saffola-Master Brand

Activities done:

- Refining (In house)
- Packaging (Subcontracted)
- Refining Capacity 200 Tons/day
- First Marico plant with RBO Refining Capability



Baddi Network



2 Subcontract Filling Locations

Oils Processing Capability



Edible Oil Refining

FFA

MIV

Wax

Gums

-Total



Rice Bran Oil

Degumming	Pre-bleaching	Dewaxing	Post Bleaching	DO
Gums	Spent Earth	Wax	Spent Earth	DFA

RBO Refining is a complex and recent phenomena

Type of Refining

Physical Refining

FFA is removed "physically" i.e. by using steam in deodorizer

By –Product generated is DFA(distilled fatty acid)

Chemical Refining

FFA is removed "chemically" i.e. by neutralizing FFA with caustic

By –Product generated is Soap

Establishing Physical Refining of RBO has been the key to Baddi

Oil Transitions



Raw KO

Ref KO

Quality

Certified with IMS,FSSC:22000 & EnMS

Laboratory is accredited with ISO:17025:2005

Automation & Latest Technology



Lowest Defects across FMCG in Flexi

Zero Product Recall

Raw to Packaged Journey : 5 Stage Quality Check



Process and Certifications



IT Mission: Leveraging IT & Analytics for problem solving



Utilizing <u>SAP MII</u> for Plant Production , Energy mgmt & Quality Mgmt

<u>,</u>		
act.costs 🂾		
06.2017	07.2017	08.2017
	act.costs 🗗 06.2017	act.costs 🗳 06.2017 07.2017

Utilizing <u>SAP PM</u> for equipment level cost & MTTR

Extending <u>**Tableau</u>** for MVC, By Products Realization & Supply Chain</u>



Sustainability Focus Need @ Baddi



Baddi Plant contributed to ~60% of Marico's Total Energy

Inline with Marico's mission of being a Responsible Corporate

Why GreenCo

- Aim to build Green culture across value chain
- CII GreenCo a very <u>Robust</u> and <u>Holistic</u> Framework
- Pioneer Institution in promoting GREEN concepts across the country
- A holistic framework to assess and evaluate the performance of the company's activities on the GREEN front
- More than 450 organizations in India are voluntarily committed to this initiative





GreenCo Structure-Holistic



GreenCo Framework

GreenCo Rating framework- Manufacturing Sector

S.No	Parameters	Weightage (Points)
1	Energy Efficiency	9 150
2	Water Conservation	100
3	Renewable Energy	100
4	GHG Reduction	100
5	Waste Management	100
6	Material Conservation, Recycling & Recyclables	100
7	Green Supply Chain	100
8	Product Stewardship	75
9	Life Cycle Assessment	75
10	Others (Ventilation, Site Selection, Green Belt & Innovation)	100
	Total	1000



GreenCo:Kick-Off @Marico Baddi



Objective

Resource Conservation

- Sustainability
- Meeting Future Regulations
- •Benchmarking



Key Challenges

- Awareness & Capability Building
 - •Stakeholder Alignment
- Integration with existing Systems
- Implementation of identified improvement projects
- •Benchmarking

Greenco Rating preparation Launched in Apr'16

10 Teams were constituted-1 for each Pillar

Capability Building



Spreading...the GREEN journey...



Marico cryptX

the GREEN quiz



Christmas with GREEN Santa



Marathon with GREEN footprint







Awareness Creation – Consumers

Media Ads



- 1. Product Quality
- 2. Health Benefits
- 3. Technical Details

Consumer Connect

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Discotting Tim.

1. Dawn to Dusk

2. Selected consumers (Marico product users)

3. Personalised visits to capture insights i.e. entire day to day mannerisms, preferences, usage patterns, food habits etc.

Saffola Life



- 1. World Heart Day
- 2. Chhote Kadam...
- 3. Women Heath
- 4. Healthy life style score

1.5 L Cholesterol Tests @700 cities

Greenco Rating System : Policies







GreenCo Pillars
1. Energy Efficiency

Target Setting



Specific Energy Consumption

Target Setting Basis

- Historical Plant Performance
- SEC Reduction Over last few years
- Plant Performance Better than National and International BM
- Hence Further Opportunity for the SEC Reduction is less

- 1. 3% reduction in overall energy per year
- 2. SEC Reduction Targets to be revised every 3 Years

Energy Profile



29.45% of Purchased electricity is from Hydel plants & Renewal Sources http://cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver10.pdf

Renewal Non Renewal

Energy Monitoring



Overall 32 meters installed for electrical consumption ; power distribution diagram available
 4 steam flow meters installed ; thermal energy distribution diagram available



Air Comp.	
BLR-DEO	
Boiler	
Common	
Cooling Tower	
De-Gumming	
De-waxing	
Lighting	

Thermal Energy Saving (GJ)



BLR-Deo	
Boiler	
Common	
De-gumming	
Dewaxing	



Power Generation at zero operating cost

Renewable Power

Saving : Cost : ₹ 39 lac / Year ; 80 kW/h power generation ; 8% power

Low temp. required under vacuum Reduction in steam consumption Better colour of recovered oil

Condensate Recovery



Impact



Recovered oil usage started with an innovation solution to identified problems **Benefit : 3.22 Cr.s** FY 15-16; **Impact 6% higher SEC** due to additional processing till date

2. Water Conservation

Target Setting



Water Monitoring-The Key starting Point



Reduction in SWC - Projects



Rain Water Harvesting-Roof Top

Roof Cover area – 1317.2 m²



Rice Husk Shed





Storing Rain water in Raw water Tank

Impact:

Annual Water Conservation : = Shed Area (m²) X Annual Rain Fall (mm) X Run off coefficient

=1317.2 X <u>600</u> X .9 = 711.28m³ 1000

Source: Annual rainfall from Wikipedia Run off coefficient from GreenCo Book Total Roof Area – 9833.81 m² Roof area covered – 1317.2 m² → Total 13% of the roof RWH potential captured <u>Way ahead :-</u> → Conservation of 100% of the roof RWH potential by FY17-18

Rain Water Harvesting-Open Area





Storm water Drain run-off water is collected in Rain water Harvesting System

19% of the total non roof area conserved in Rain water harvesting system



Collected Water filtered and charged in ground



Charged Water Helped to maintain the ground water level

Impact



3. Renewable Energy

Target Setting



% Renewal Energy

Target Setting Done Basis the Identified Projects 100% Renewable Energy in FY 20



High GHG emission with FO

Now Husk Carbon Neutral Fuel

Renewable Energy

Renewable %

• 73.8% Non Renewable Energy Substituted

Husk Fired Boiler installation



Alternate Fuel



Paddy Straw & Briquette

25% can be used

Impact



1. Solid fuel boiler installed in FY 14

2. Steam turbine installed in FY 16

4. GHG Emissions

GHG Emission Inventorisation



GHG Emission (CO₂e MT) FY 13-14



Baseline

• All Emissions of FY 14 are taken as Baseline

Target Setting



GHG Projects

Annual GHG Reduction (CO₂e MT)



5. Waste Management

Target Setting



Specific Hazardous Waste Disposal Targets (Kg/MT)







Waste Collection System



REUC

ħ





Waste Reduction-Results



6. Material Conservation

Losses Reduction - Refinery



Losses are indexed at 4% FFA

Project 1: RBO DFA Purity Enhancement



Project 2: Physical Refining KO Oleic



First of its kind Processing for Safflower Oil

7. Green Supply Chain

Green Supply Chain Planning

Total Delivery Cost Model

Dynamic Planning

- Dynamic Planning between Baddi & Jalgaon Locations
- Targeting minimum total delivery cost depot wise between Baddi & Jalgaon Plants

Depot Wise

Depot demand allocation to filling plants with minimum Procurement, Filling & Distribution cost
Allocation of depot is dynamic & changes month on month



SKU Wise

- •SKU demand are allocated plant wise basis TDC
- •Allocation of depot is dynamic & changes month on month
- •Minimum distribution cost lead to lower truck travelled for FG dispatches



Initiative in Green Logistics & Impact

Diesel Consumption Reduction-PM Inbound Delivery



CO2 Emission(Ton)



13% Emission reduction


Initiative in Green Procurement

Procurement of highest energy efficient electrical equipment



Solid Fuel Boiler ID Fan



Solid Fuel Boiler FD Fan

Sr No	Motors	Rating (KW)	Procurement Year	Grade	Efficiency %
1	Solid Fuel Boiler ID Fan	132	FY13	IE2	94.9
2	Solid Fuel Boiler FD Fan	75	FY13	IE2	94.7
3	Boiler Feed water Pump	30	FY13	IE2	94.7
4	Air Compressor	110	FY 16	IE3	95.4
5	Low VOC paints & sealants		FY17		



Boiler Feed water Pump







8. Product Stewardship

Product Safety



Defect Reduction



9. Life Cycle Assessment

Framework & Scope



Cradle to grave study including cultivation of crops in farm, production of packaged oil at Baddi, consumption by user and disposal of packaging.



Study Outcome



Cultivation phase is mainly dominated by field emissions

Further electricity consumption and fuel consumption are identified as hotspots for improvement

10. Others

Recreational and Inspirational Spaces



MCL organised with monthly games



Marico Day celebration



Annual Staff Picnic



Awareness campaign among school children regarding environment

Key Impact Areas summarized: GreenCo

Sr. No.	Area	Key Impact	
1	Energy Efficiency	27.5% reduction achieved in last 3 years	
2	Water Conservation	22 % Reduction in last 2 yrs	
3	Renewable Energy	Using 85% Renewable Energy	
4	GHG Reduction	70% Reduction in GHG Emission since last 4 years	
5	Material Conservation	28% Reduction in Refinery Losses	
6	Waste Management	16% Reduction in Hazardous Waste and 28 % Reduction in Process Effluent in last 3 years.	
7	Green Supply Chain	PM Material consumption Reduction Laminate (71%) , Oil Flexi(30%) , CFC(-50%) in last I year	
8	Life Cycle Assessment	Life Cycle Assessment for the Saffola Gold and Saffola Total conducted and basis that Targets taken.	
9	Others	 15 plant projects recognized as innovative projects Started use of Eco-friendly HK chemicals and Paints 	

Key Recognitions in FY 17-18

Marico Baddi - Youngest Marico plant to win





RBNQA Award



World Class Award



Marico Baddi becomes first HP plant to be rated Green Co Gold



Play video



TEAM BADDI

SUSTAINABILITY AND SOCIAL PURPOSE

Marico: Make a Difference-Journey Continues