



CII GREENCO Plant Visit-Marico Limited, Baddi



16th December 2017

Marico Portfolio : Beauty & Wellness

■ Hair Care

- Hair Nourishment
 - Oils/Serums/Tonic



■ Healthcare

- Healthy refined edible oils
- Oats



■ Male grooming/ styling

- Deodorants
- Hair Creams/Gels/Wax



■ Skincare

- Body Lotion



Making a Difference for 25 years

The World of Marico

25+
YEARS OF RICH
EXPERIENCE

25+
countries present in
across emerging
markets



25%+
total shareholder return
since listing



Largest
coconut oil brand
in the world -
Parachute



**1 out of
every 10**

coconuts grown in India
is used by Marico



**1 out of
every 3**

Indians' lives are touched
by Marico

18%

topline CAGR growth
since inception



26%

bottomline CAGR growth
since inception



10

acquisitions in
10 years



95%

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



80%

portfolio with consistent
market share gains Y-o-Y



>20,000

population town mostly
covered by Marico's
distribution network

7.5 Crores

packs sold every
month



7.5 Crores

households touched
every month

4.6 Million

retail outlets serviced by
nationwide distribution
network

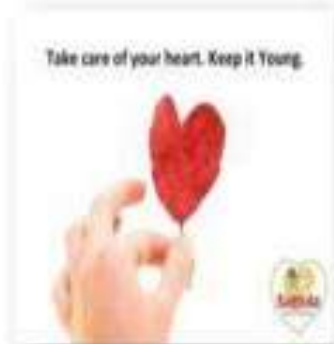
Market Leadership: Key to Category Choice

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 Advanced	Hair Gels & Creams (India)	~ 52%*	1
Livon / Silk & Shine	Post Wash Hair Serum (India)	~79%	1
Parachute Advanced 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

SAFFOLA



Health Care Brand



Gold, Tasty, Active, Total



Blended Vegetable Oils

PARACHUTE



Purpose of Life is to have a life of Purpose



Marico PURPOSE

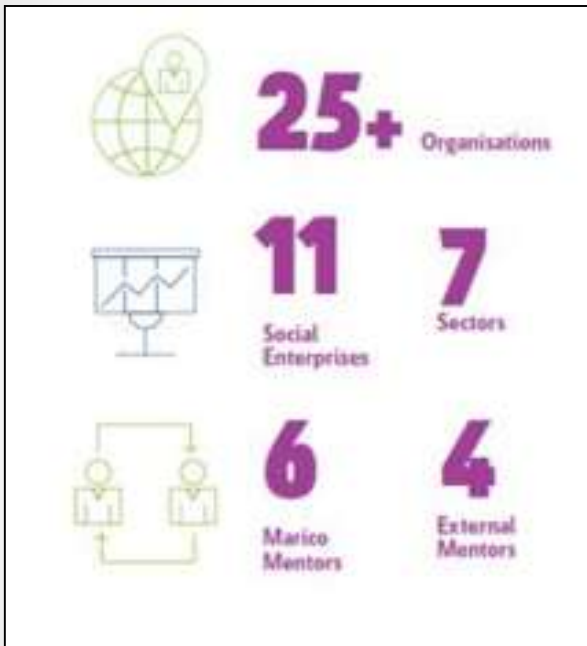
**Only when you're Empowered
do you Rise above the task at hand
and take complete ownership**

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

3 Pivots of Sustainability

- 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

- Projects to replace Fossil Fuels
- Bio Alternatives for Raw Materials
- Sustainable solutions for Packaging, Transportation and Storage

Special Focus on Reduction of “Energy” and “Water” Consumption



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

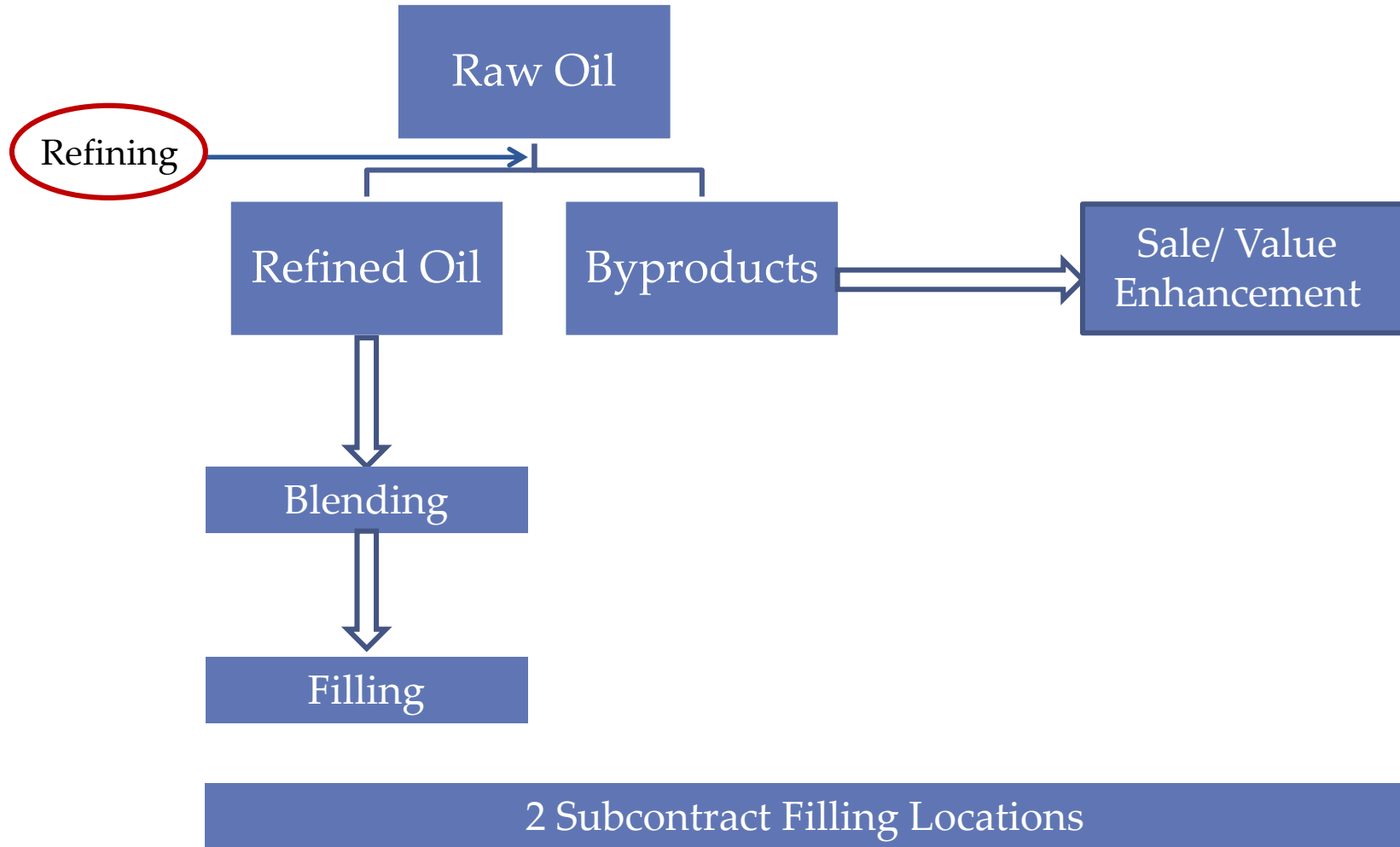
Some Facts

- 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

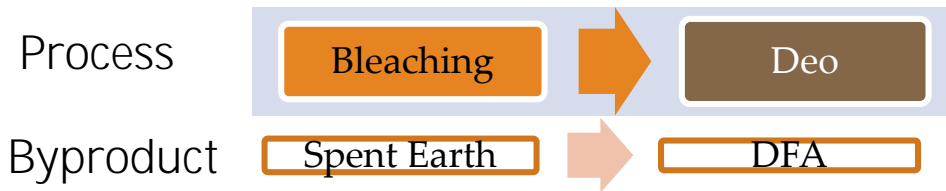
Baddi Network



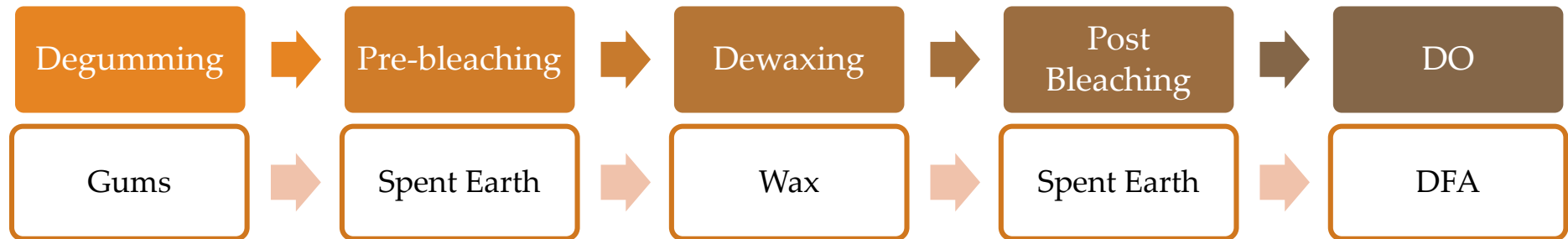
Oils Processing Capability

Edible Oil Refining

Soft Oils



Rice Bran Oil



RBO Refining is a complex and recent phenomena

Type of Refining

Physical Refining

i.e. by using steam in
deodorizer

By Product generated is
DFA(distilled fatty acid)

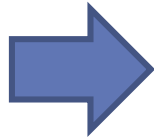
Chemical Refining

i.e. by neutralizing FFA with
caustic

By Product generated is Soap

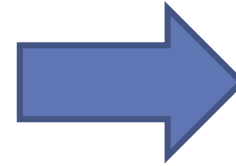
Establishing Physical Refining of RBO has been the key to Baddi

Oil Transitions



Raw RBO

Ref RBO



Raw KO

Ref KO



Quality

Certified with IMS,FSSC:22000 & EnMS

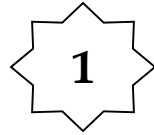
Laboratory is accredited with ISO:17025:2005

Automation & Latest Technology

Lowest Defects across FMCG in Flexi

Zero Product Recall

Raw to Packaged Journey : 5 Stage Quality Check



Process and Certifications

MBEM

Highest Score
for consecutive
3 years

FSSC 22000

Recertification
audit completed
in Apr-17

NABL

Enhance
accreditation
scope by 7 new
test with total
26 tests

IMS

Recertification
of QMS along
with
surveillance of
IMS completed
in Oct-16

EnMS

Surveillance
audit completed
in Dec-16

Act Now

Highest Score in
launch year

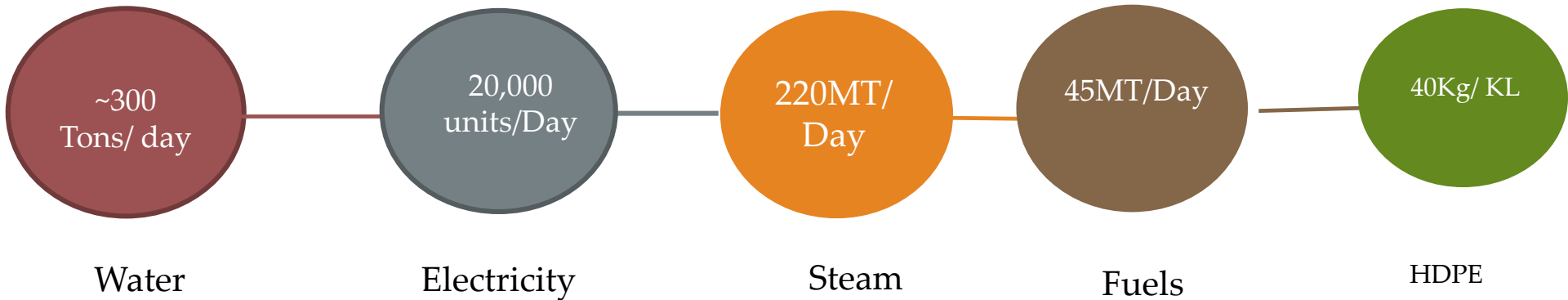
IT Mission: Leveraging IT & Analytics for problem solving

Extending **Tableau** for MVC, By Products Realization & Supply Chain

Utilizing **SAP MII** for Plant Production , Energy mgmt & Quality Mgmt

Utilizing **SAP PM** for equipment level cost & MTTR

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 **Robust** and **Holistic** 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: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

10 Teams were constituted-1 for each Pillar

Capability Building



Greenco Awareness Session Conducted by Top Management



Training Programs for Business Associates



Training Programs Conducted :15

Total Training Manhours : 500



Awareness Creation Consumers

Media Ads

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

Consumer Connect

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
3. Women Health
4. Healthy life style score

1.5 L Cholesterol Tests @700 cities

Greenco Rating System : Policies

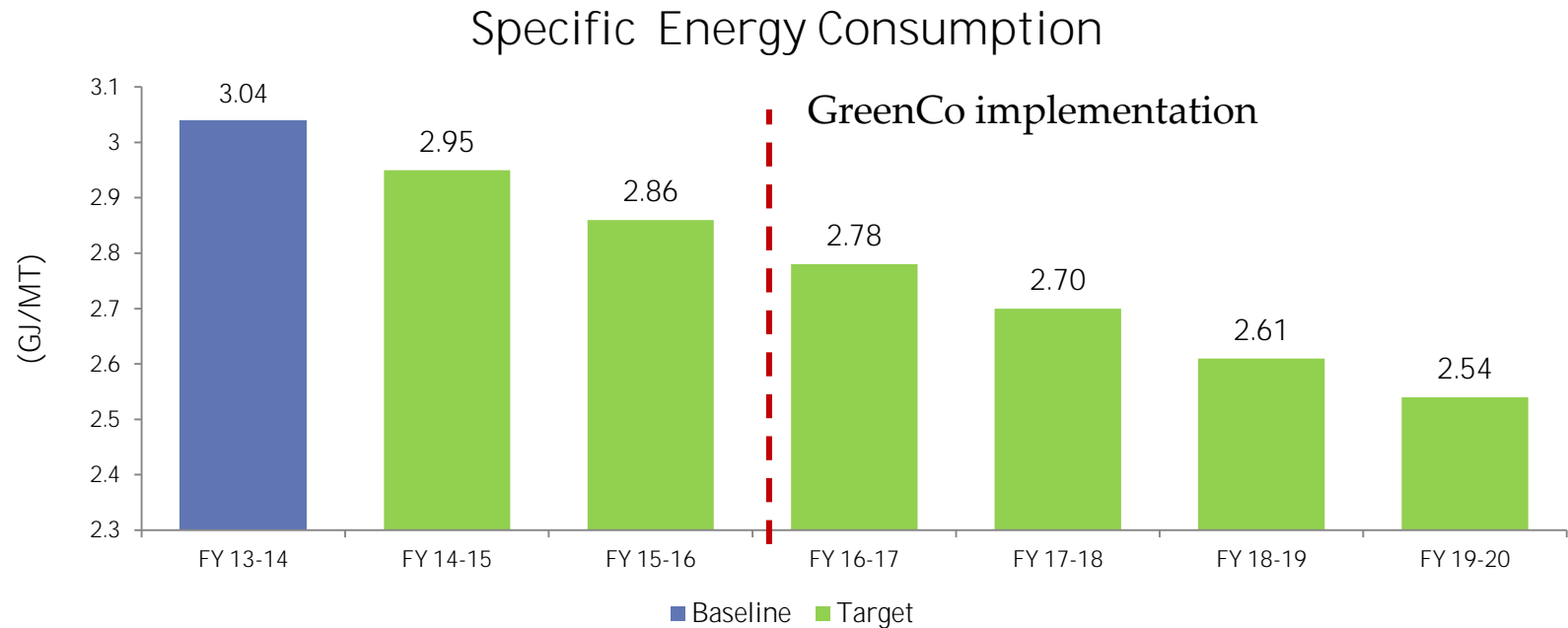
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GreenCo Pillars

1. Energy Efficiency

Target Setting



Target Setting Basis

Historical Plant Performance

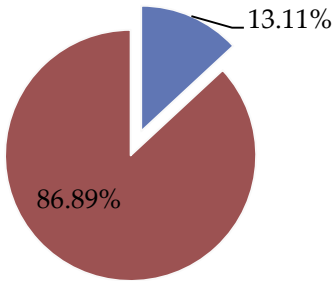
SEC Reduction Over last few years

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



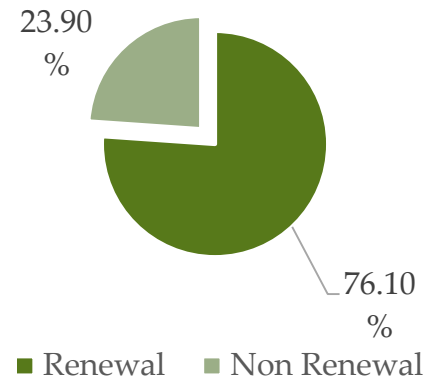
■ Electrical ■ Thermal

Electrical energy : 1. Purchased electricity (Hydel plants)#
2. Diesel generator

Thermal energy : 1. Boiler
2. Thermic fluid heater

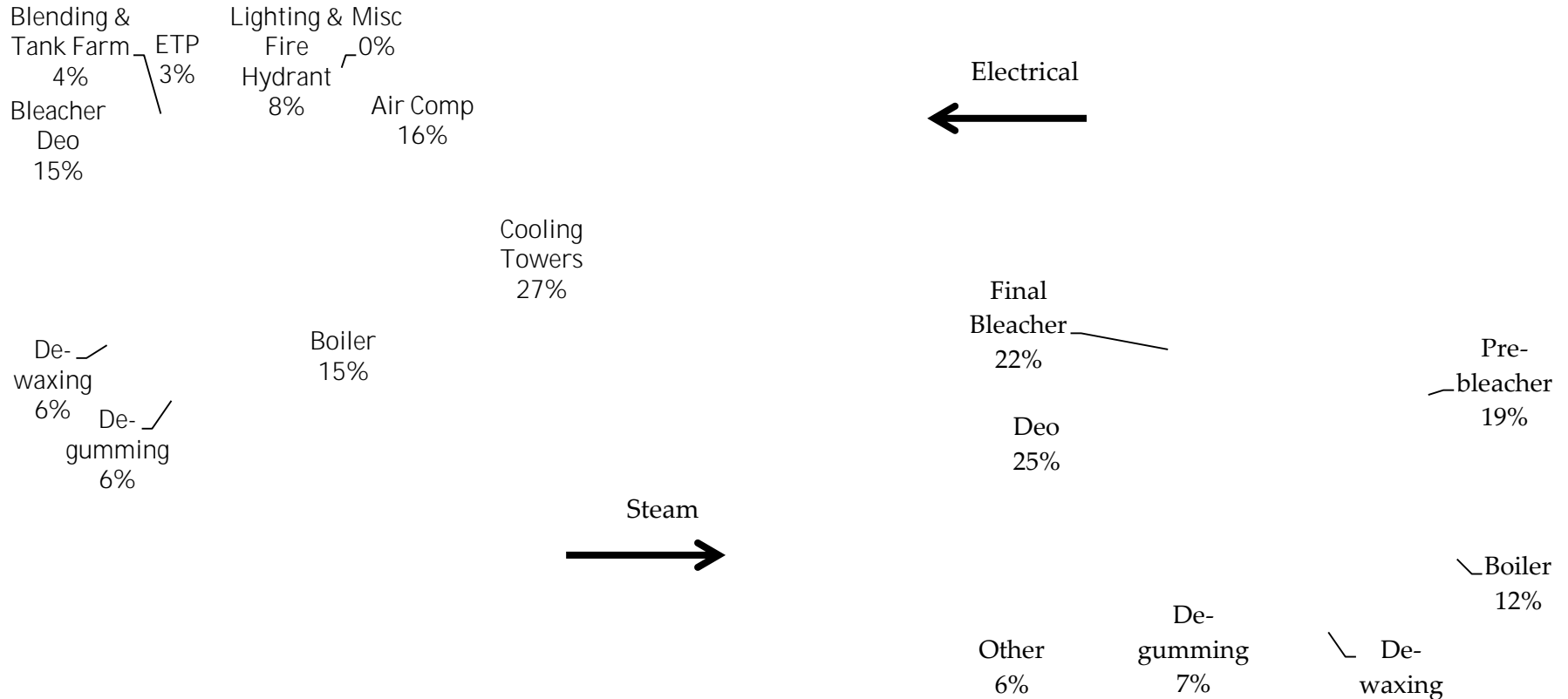
Renewable energy : 1. Husk (Boiler)

Non renewable energy : 1. Purchased electricity
heater
generator
2. Thermic fluid
3. Diesel



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

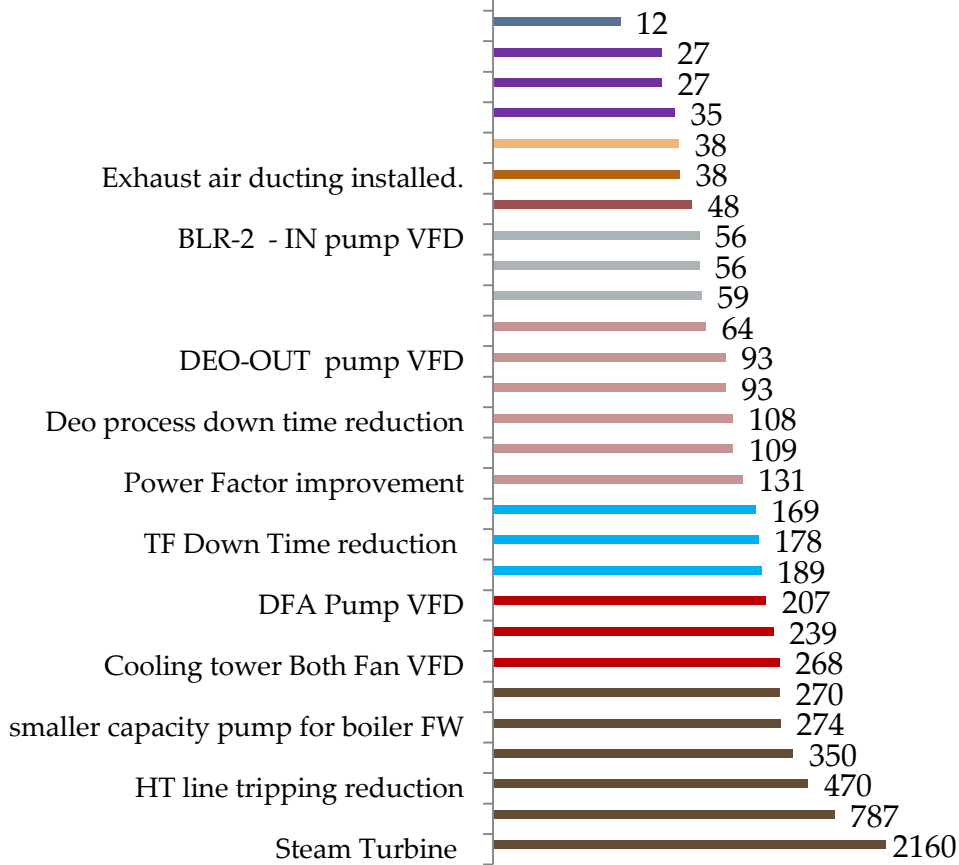
Energy Monitoring



1. Overall **32 meters** installed for electrical consumption ; power distribution diagram available
2. 4 steam flow meters installed ; thermal energy distribution diagram available

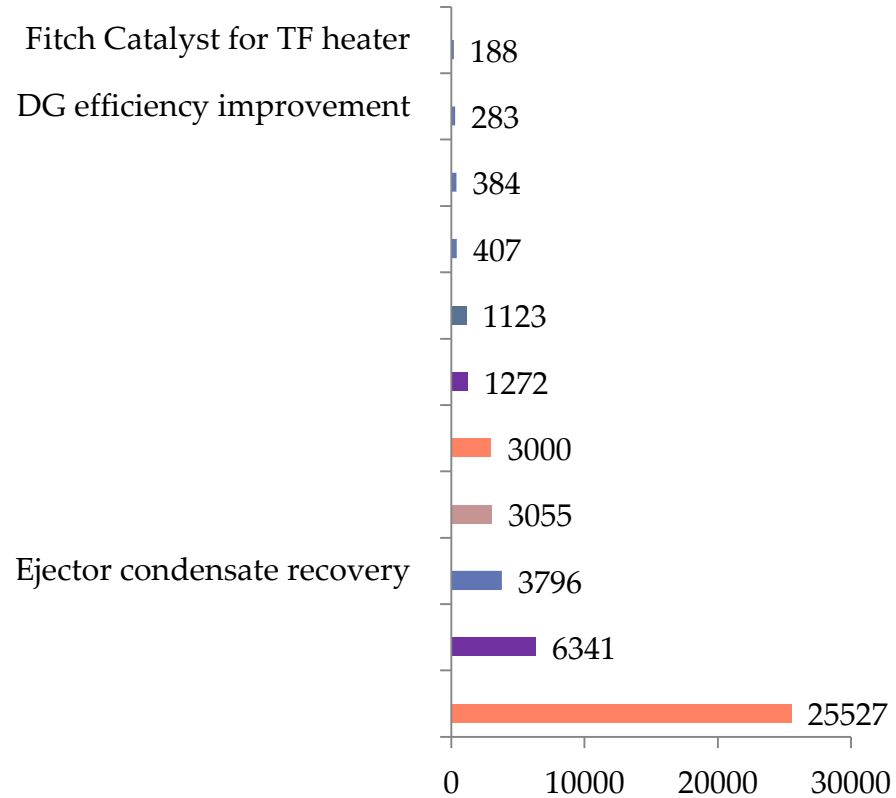
Key Projects

Electrical Energy Savings (GJ)



Air Comp.	Light Blue
BLR-DEO	Pink
Boiler	Orange
Common	Purple
Cooling Tower	Red
De-Gumming	Olive Green
De-waxing	Dark Purple
Lighting	Light Green

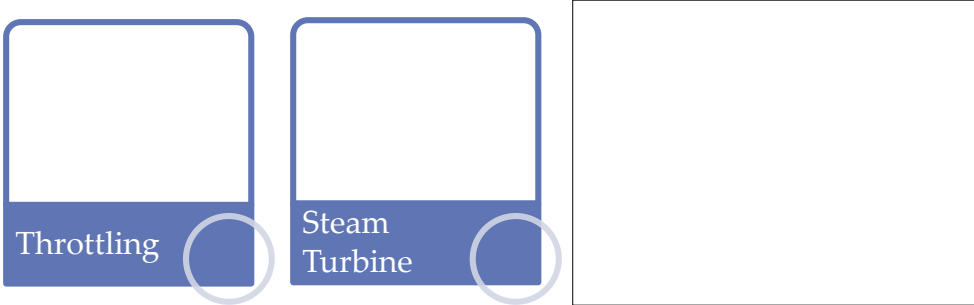
Thermal Energy Saving (GJ)



BLR-Deo	Pink
Boiler	Orange
Common	Purple
De-gumming	Olive Green
Dewaxing	Dark Purple

Key Projects

Turbine Installation



Throttling Inefficient Operation Eliminated

Power Generation at zero operating cost

Renewable Power

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

Wax Heating under Vacuum

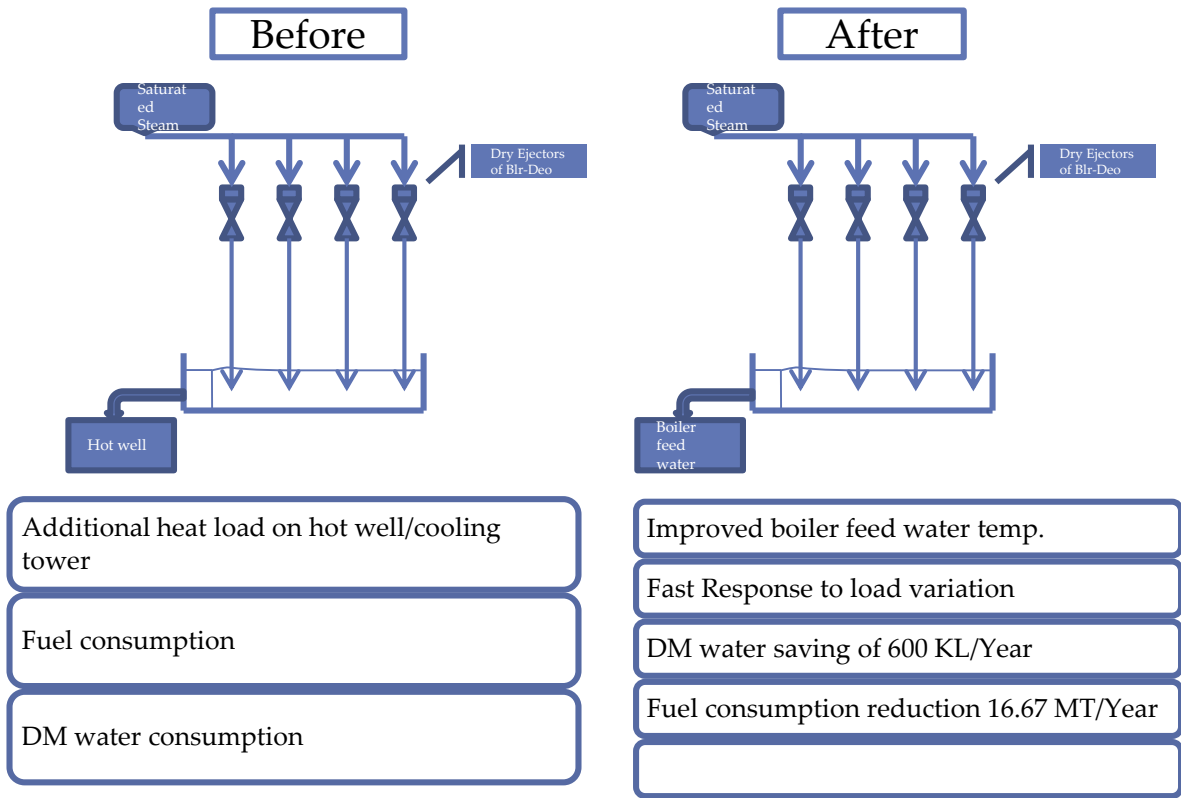
Low temp. required under vacuum

Reduction in steam consumption

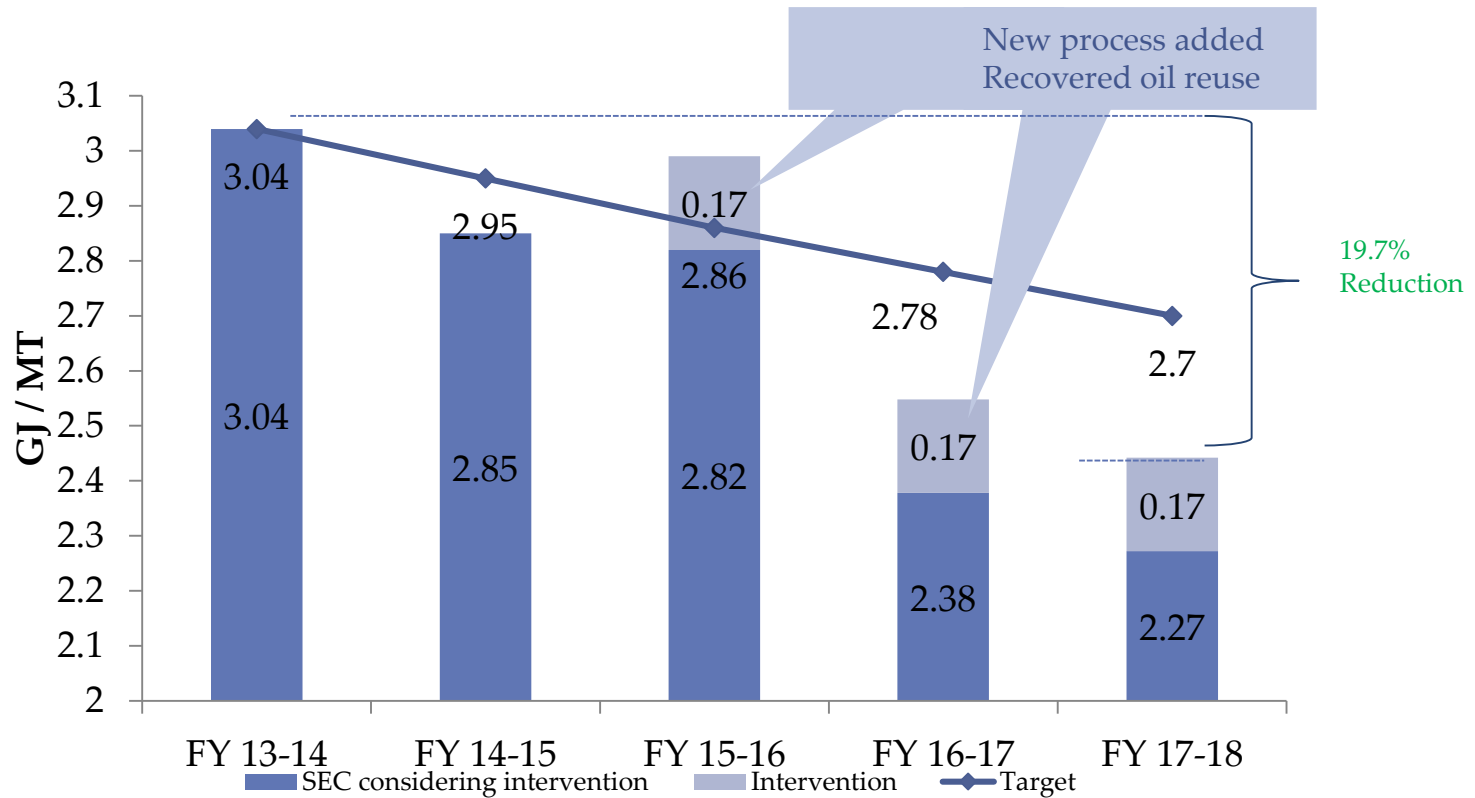
Better colour of recovered oil

Key Projects

Condensate Recovery



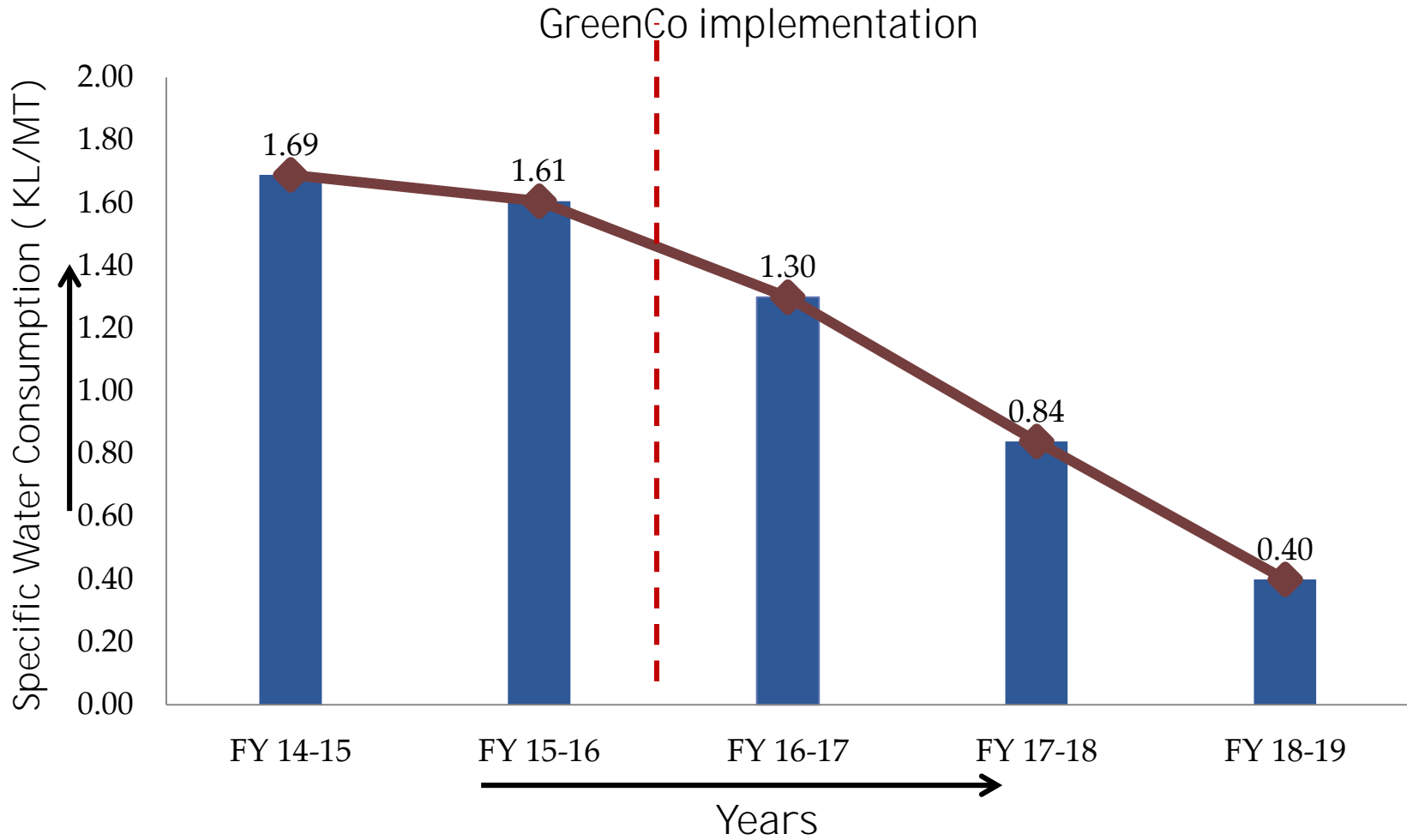
Impact



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

$$= \frac{1317.2 \times 600 \times .9}{1000} = 711.28 \text{m}^3$$

Total Roof Area 9833.81 m²

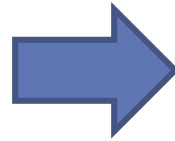
Roof area covered 1317.2 m²

➤ Total 13% of the roof
RWH potential captured

Way ahead :-

➤ 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

Collected Water filtered and charged in ground



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

Charged Water Helped to maintain the ground water level

Impact



**36% Reduction
in Last three
Years**

3. *Renewable Energy*



Target Setting

Target Setting Basis

Historical Plant Performance of
Renewable Energy %

Further Opportunities
Identified

GreenCo
implementation



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

Key Projects

FO Boiler

Husk Boiler

High GHG emission with FO

Now Husk Carbon Neutral Fuel

Renewable Energy

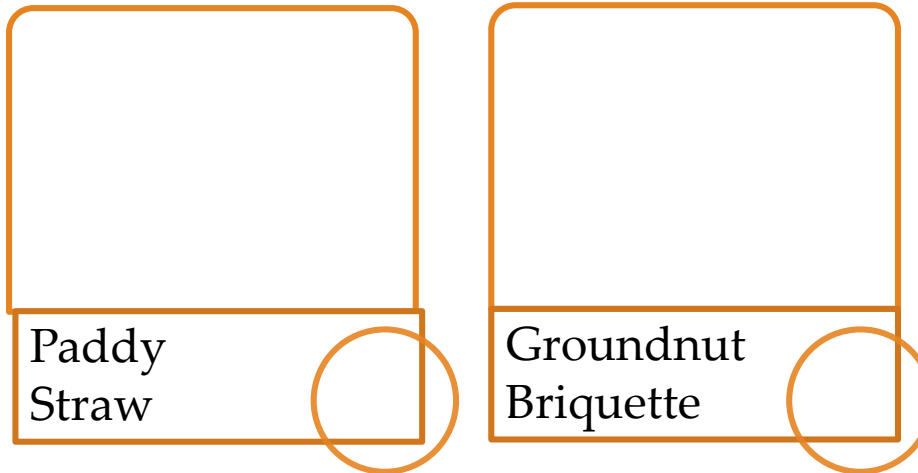
Renewable %

73.8% Non Renewable
Energy Substituted

Husk Fired Boiler installation

Key Projects

Alternate Fuel

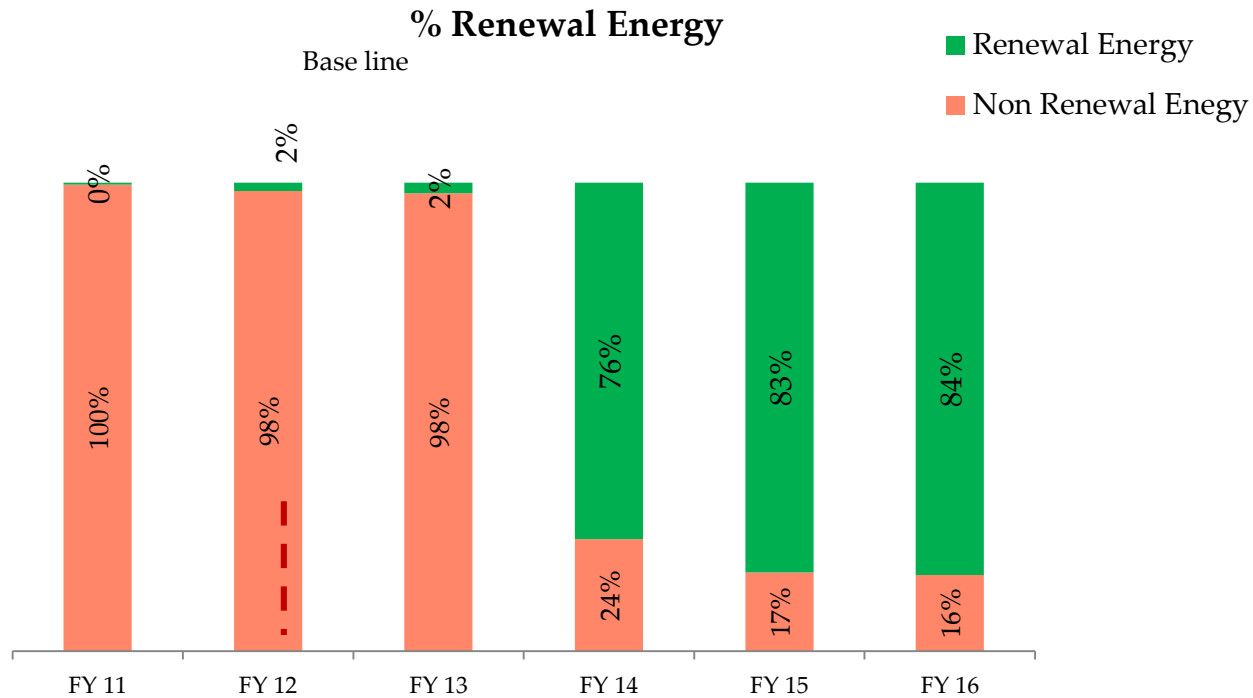


Paddy Straw & Briquette

25% can be used

Impact

Actual Renewable Energy Ratio



1. Solid fuel boiler installed in FY 14

2. Steam turbine installed in FY 16

4. *GHG Emissions*



GHG Emission Inventorisation

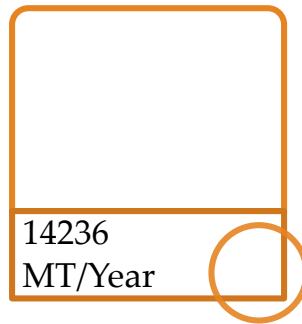


Baseline

All Emissions of FY 14 are taken as Baseline

Target Setting

GHG Projects

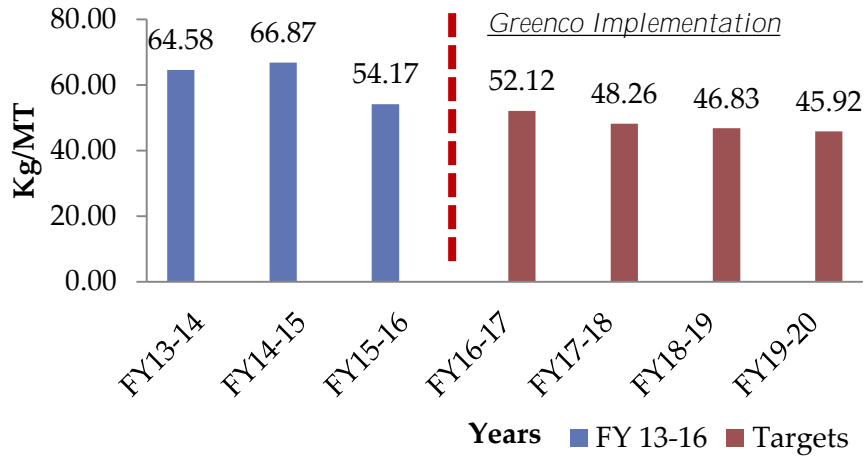


5. Waste Management

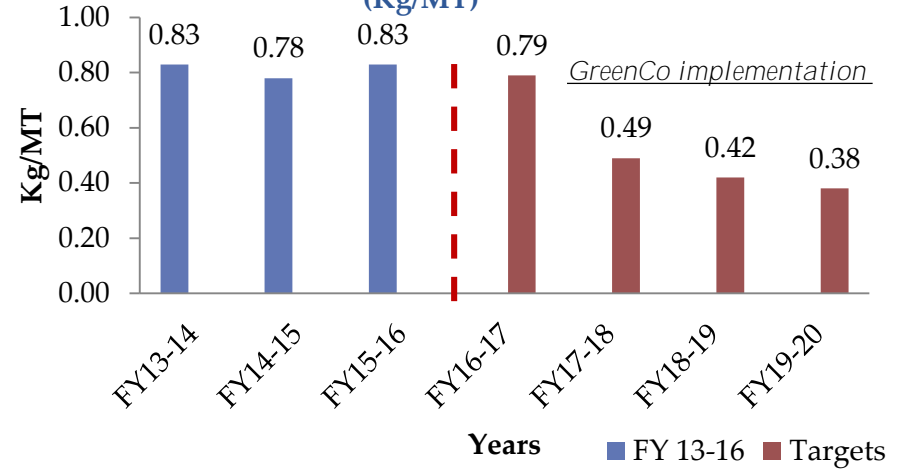


Target Setting

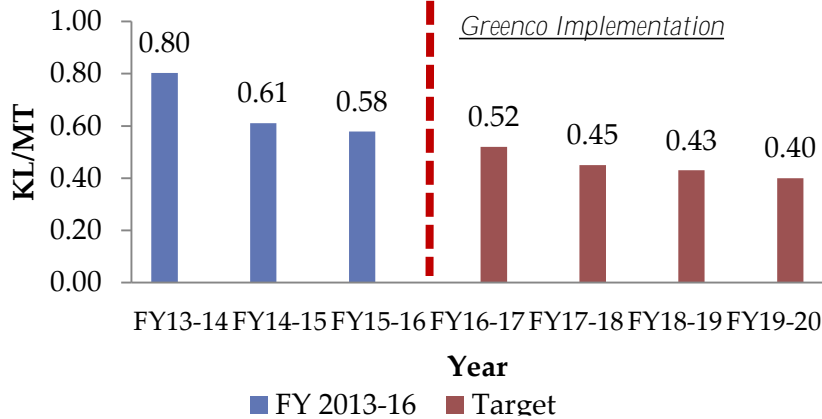
Specific Hazardous Waste Disposal Targets (Kg/MT)



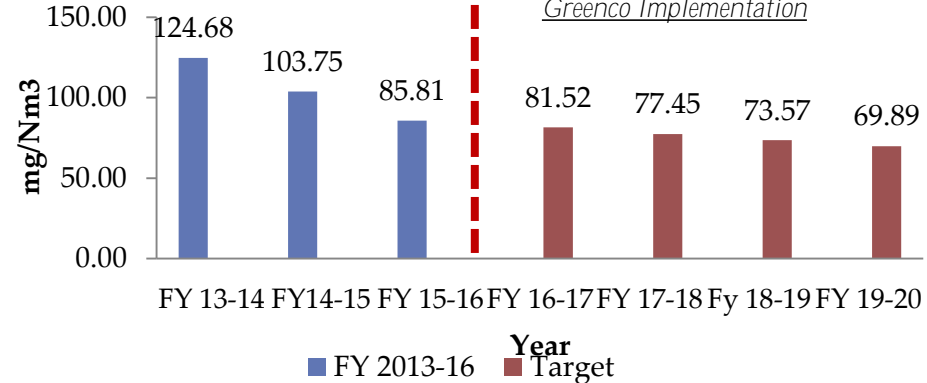
Specific Non-Hazardous Waste Disposal Targets (Kg/MT)



Specific Effluent Generation (kL/MT)



Boiler SPM Reduction (mg/Nm3)



Waste Collection System

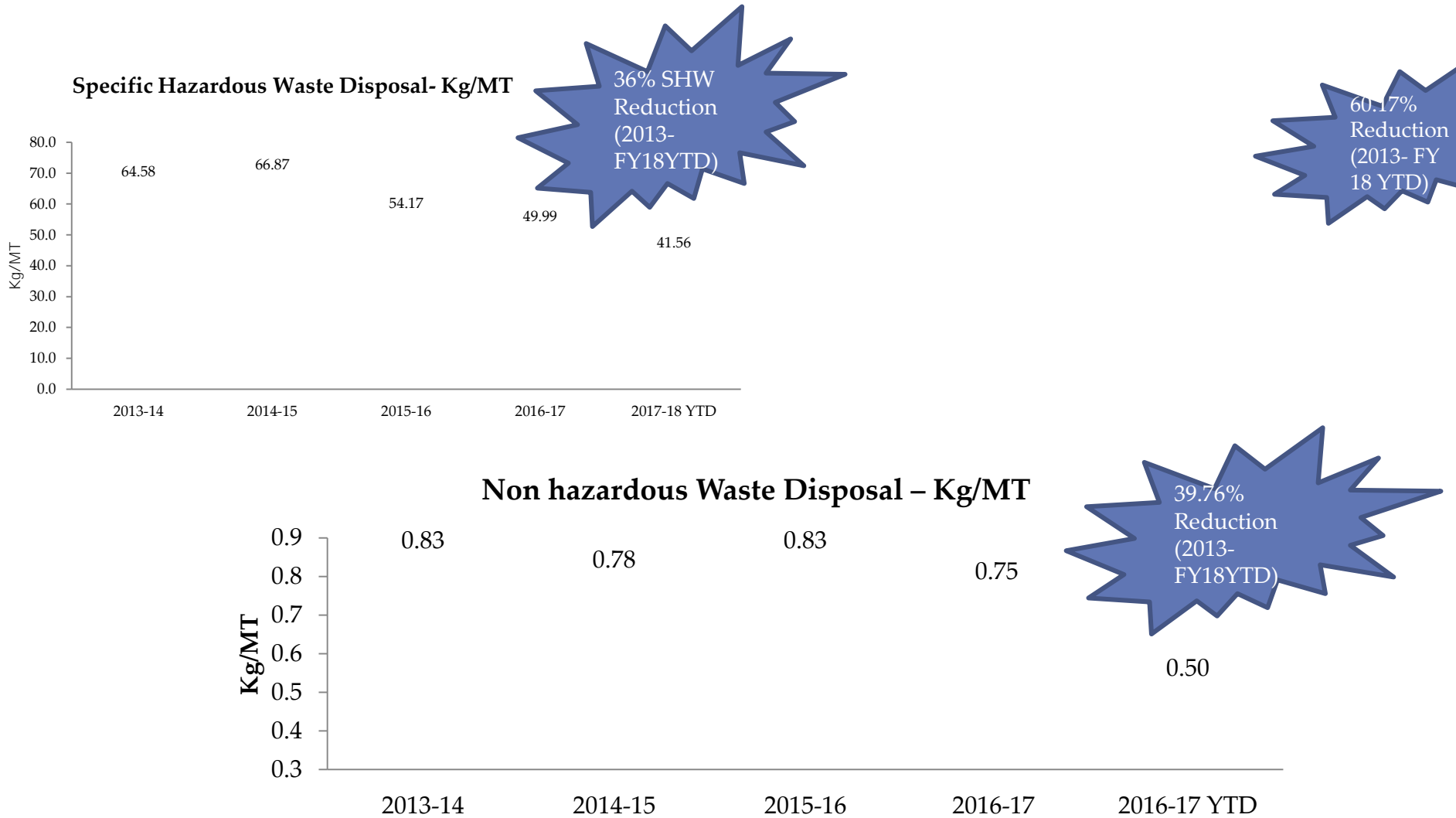
Key Projects

GUMS AND OIL RECOVERY FROM ETP

WATER RECOVERY FROM DEGUMMING SECTION

Impact : 30 KL
Effluent Load
Reduction in ETP
with Condensate
Recovery from
Degumming

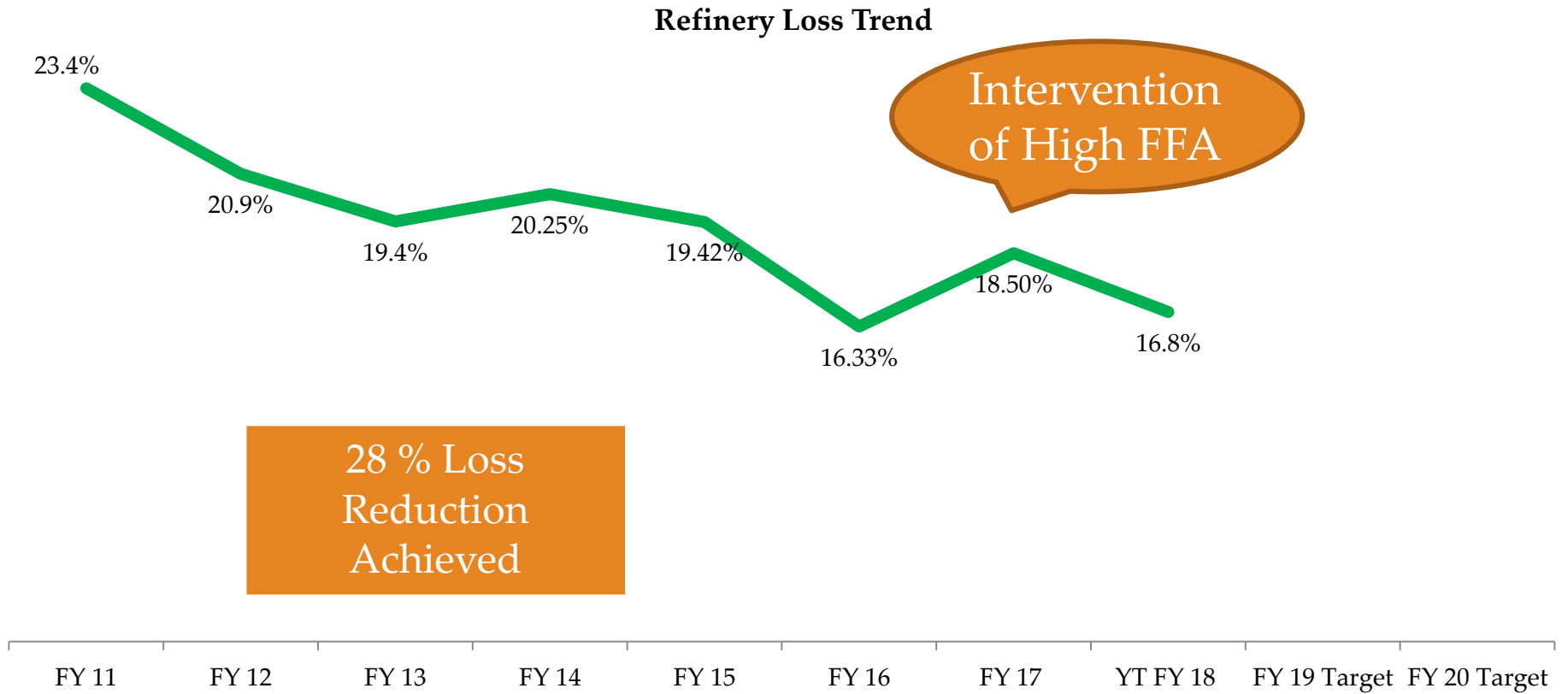
Waste Reduction-Results



6. Material Conservation



Losses Reduction - Refinery

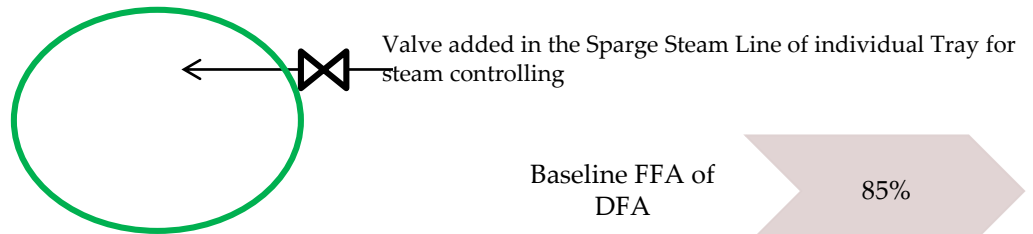


Losses are indexed at 4% FFA

Project 1: RBO DFA Purity Enhancement

DDR

DDR-Two Trays Showing
Mammoth Pumps



Baseline FFA of
DFA

85%

Actual FFA of
DFA

86.9%

Yield
Improvement

0.13%

Oil Saved

39.3 MT

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

-18%
CO2 Emission

-18% Diesel
Consumption

-10% KM/KL

Initiative in Green Logistics & Impact

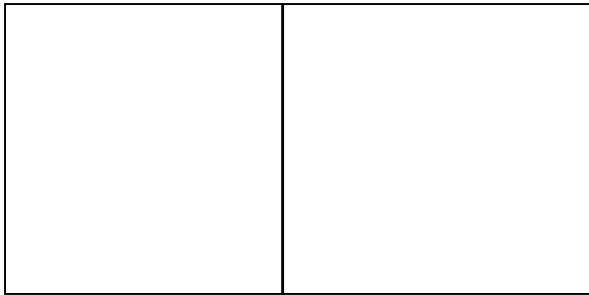
Diesel Consumption Reduction-PM Inbound Delivery

CO2 Emission(Ton)

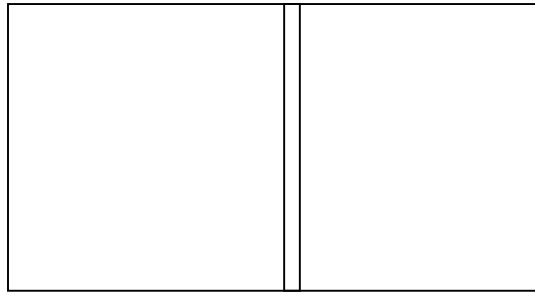
13% Emission reduction

Initiative in Green Procurement

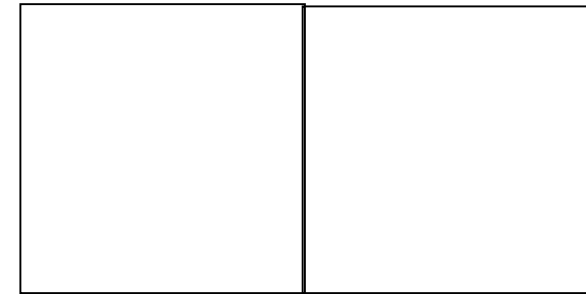
Procurement of highest energy efficient electrical equipment



Solid Fuel Boiler ID Fan



Solid Fuel Boiler FD Fan



Boiler Feed water Pump

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		

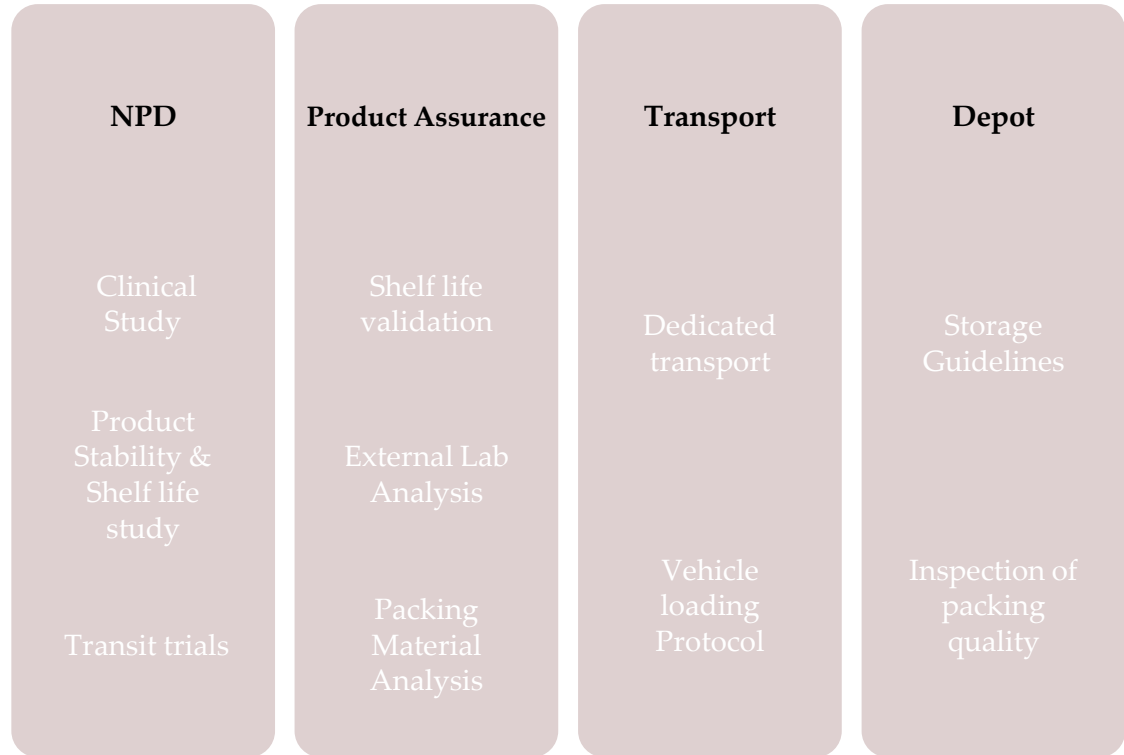
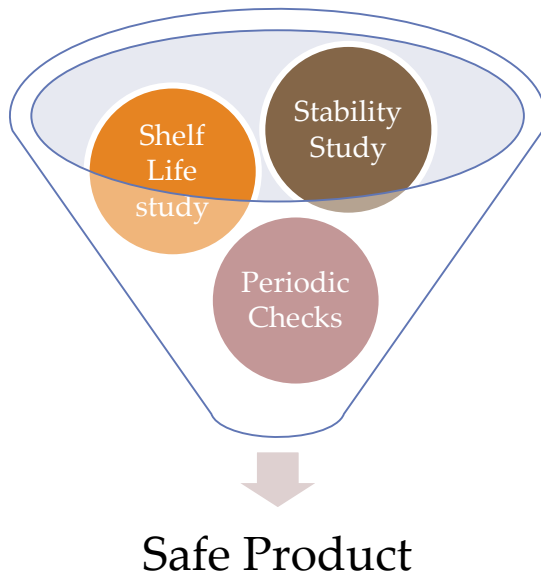
Air Compressor

Low VOC sealant

8. *Product Stewardship*



Product Safety



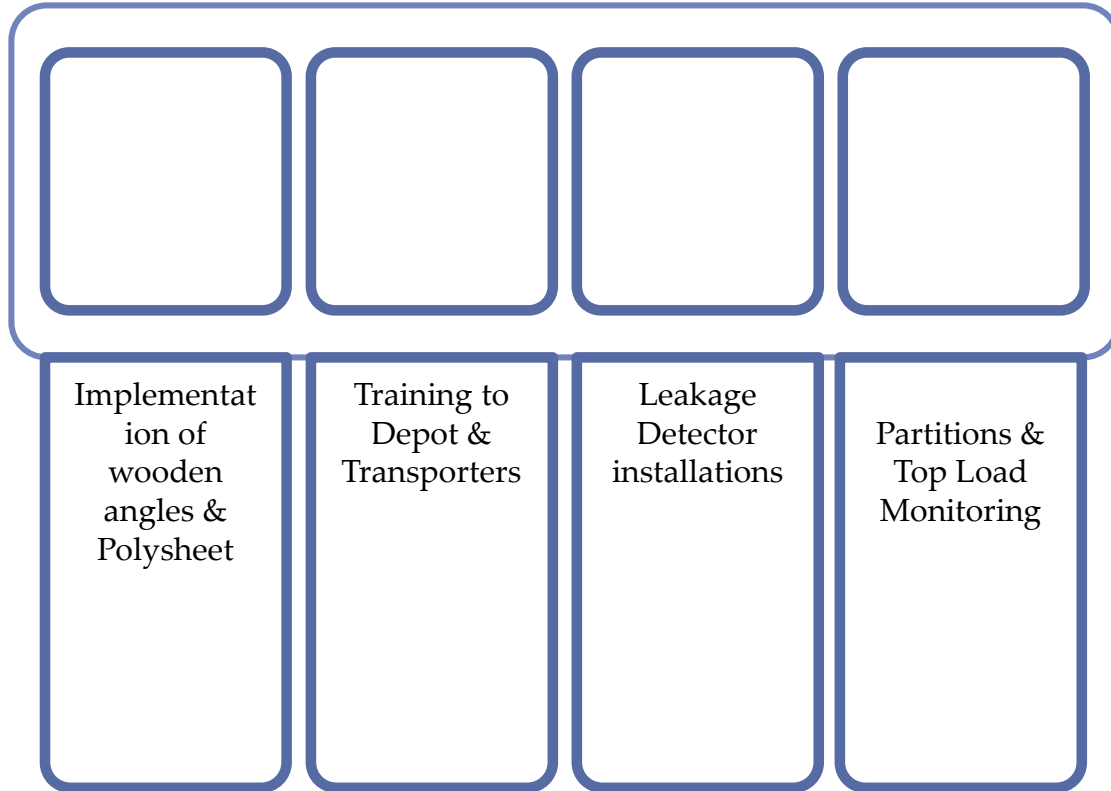
Physical Refining

Winterization

Bon Poly Implementation

Nitrogen Purging

Defect Reduction



9. *Life Cycle Assessment*



Framework & Scope

Study Outcome

10. *Others*

Recreational and Inspirational Spaces

MCL organised with monthly
games

Annual Staff Picnic

Marico Day celebration

Awareness campaign among school children
regarding environment

Key Impact Areas summarized: GreenCo

Key Recognitions in FY 17-18

Marico Baddi - Youngest Marico plant to win

RBNQA
Award



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

• TEAM BADDI •

Marico: Make a Difference-Journey Continues

