Green Packaging Initiatives

ACSEN Tex P Ltd

SF No. 533/4A2, Cuddalore Main Road

Manivilundhan South PO, Attur

Salem – 636 121, TamilNadu, India

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Company Overview

- ACSEN Tex is committed to the sustainable manufacturing of all our products through our environmentally responsible production methods.
- We have been recognized by with the GreenCo Gold rating awarded to us by CII-GBC. We are the only standalone spinning mill in the entire country to have achieved this Gold Rating.
- We provide Weaving and Knitting yarns of fibres such as Viscose, EcoVero, Tencel and Modal from 20s to 40s count with Ring Spinning and Vortex Spinning Technology, and Ring Spun Cotton hosiery yarns.
- We are ever conscious of our reputation built over 20+ years of frontline business experience in the textile and yarn industry.
- Have 12.25 MW of Wind Power & 2.3 MW of Rooftop Solar Power. Sustainably producing more than **110% of our consumption needs.**

The finest yarn for the finest fabric

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Production Process - Introduction

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- ✓ Cotton and Regenerated Cellulosic Fibres (Viscose, EcoVero, Tencel, Modal) are spun into yarn.
- ✓ The Cotton spun yarn manufactured in Ring frame machine with Compact Technology
  Ring Spun (17,664 Spindles)
- ✓ The Regenerated Cellulosic yarn made from following Technologies,
  Ring Spun (9,936 Spindles)
  Vortex (576 Drums)
- ✓ Our Installed capacity is 25 Tons /day in which 12 Ton Cotton & 13 Ton Re Generated Cellulosic Fibres

27600 spl

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In the continuous process of implementing Green initiatives we have innovated 3 Environmental Best Practices in the packing process

Paper cone angle changed from 5 Degree to 4 Degree

Paper cone 5 Degree | *Paper cone 4 Degree*

Paper Cone weight 50 gram to 45 gram

Paper cone 50 Gram | *Paper cone 45*

Yarn Bag Weight reduced from 200 gram to 170 Gram

PP Bag 200 Gram | *PP Bag 170 Gram*

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Trigger of the project

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ACSEN's Various Packing Methods

Cone packing

Yarn Bag

Packing 1st layer

Packing 2nd layer

Packing Final

Final Bag

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ACSEN's Various Packing Methods

Cone packing

Yarn Box

Packing 1st layer

Packing 2nd layer

Packing Final

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Paper cone 5 Degree

Paper cone 4 Degree

Paper cone angle changed from 5 Degree to 4 Degree

- When we used degree cone, only a maximum of 1.875 kgs per cone was possible due to its collapsing strength.
- After taking many trials, we implemented 4 degree paper cone, In which we can wind up to 2.5 Kg of yarn per Paper cone due to increase in its collapsing strength.

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Paper cone 50 gms

Paper cone 45 gms

Paper cone weight reduced from 50 gms to 45 gms

- The industry standard for 2.5 kg cone of yarn was 50gram paper cones.
- After taking many trials, we implemented 45 gram paper cone, In which we can wind up the same capacity of 2.5 Kg of yarn without compromising package quality.
- Hence, reducing paper cone Material consumption & contributing to Cost reduction.

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PP Bag 200 Gram

PP Bag 170 Gram

Yarn Bag weight reduced from 200 gram to 170 gram

- The industry benchmark for 62.5 kg PP yarn bag was 200 grams per PP bag.
- After taking many trials, we implemented 170 gram PP bag for yarn packing, In which we can wind up the same capacity of 62.5 Kg of yarn but the Material consumption & cost of PP bag has reduced.
- Trials are being taken for 140gram PP bags at the moment.

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Comparison with Competitor

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Mill Name	ACSEN TEX	Competitor
Corrugated Center sheet 2 Ply	60 X 2 =120	85 X 2 =170
Corrugated side sheet 2 ply	200 X 2 =400	300 X 2=600
Total weight	520 Gram/Bag	770 Gram /Bag

We have used 32% lesser packing material than competitor which contributed

to a saving of *35282 Kg /Annum* packing material alone

32%

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List of challenges faced and brief on countering

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Innovation - 1 Paper cone angle from 5º to 4º	Innovation - 2 Paper cone weight 50gms to 45gms	Innovation -3 HDPE Bag Weight from 200gms to 170gms
• We altered Cone holders in automatic cone winding machines. (Maintenance Related) • Regularly approached with supplier for paper cone degree alteration	• Regularly approached with supplier for paper cone weight reduction	• Regularly approach with supplier for weight reduction

We have implemented this innovations on 2018

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List of Tangible Benefits

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- ✓ Packing Cost saving & 100 load truck freight (Cost is Rs 22.894 Lakhs) for paper cone degree reduction (4 Degree Paper cone)
- ✓ Packing Cost Saving is **Rs 3.62 Lakhs/Annum** (45 gram paper cone)
- ✓ Packing cost Saving **is Rs 5.068 Lakhs /Annum** (170 gram PP bag)
- ✓ Total Cost Saving /Anum for all the 3 innovations =*Rs 31.582* Lakhs
- ✓ Based on the project we have reduced around Rs 0.52 / Kg (from Rs 2.50/kg to Rs 2.00/kg)

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List of Intangible Benefits

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✓Material consumption reduction 10% & 20% respectively

✓ Outbound Load reduction around 10%

- ✓ 5 degree paper cone material outbound is 1034 Load/annum where as in 4 degree paper cone its reduced to 934 load only so we have saved around 100Load/annum & **23.56 tCO2 saving /Annum**
- ✓ Raw material for Paper Cone consumption reduction is 10% which is reduced from 181000 kg to 162900 Kg /anum
- ✓ **Tree saving /day =0.84** (No of Trees Required to make about 1000kg of paper =17 Trees -11 Mtr Tall)
- ✓ Raw material for yarn bag consumption reduction is 20% which is reduced from 28960 kg to 24616 Kg

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Replication potential of project within sector

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- ✓ Cost Saving /Anum for ACSEN TEX is Rs 31 Lakhs
- ✓ Total Spindles of Tamil nadu spinning mills =1.72 Crore Spindle
- ✓ Therefore Replication potential for TamilNadu mills Rs 110-130 Crore (430 Trees /Day)
- ✓ National level Replication potential = Rs 250-330 Crore (1096 Trees /day)

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Learnings of the project

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learnings

- Resource conservation and cost saving without affecting quality of packing.
- Working with vendors for betterment of their products.
- Working with customers to reduce packing material consumption without compromising the integrity of the product.

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Power Sharing

Power sharing

WIND

Green(RPO) 2.1%

IEX 21.6%

TANGEDCO 1.0%

DG 0.8%

Renewable 74.5%

■ Renewable ⊔ IEX ■ Green ⊔ TANGEDCO ⊔ DG

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Ground Water Recharges

✓ In Annum we have 14688 KL rain water
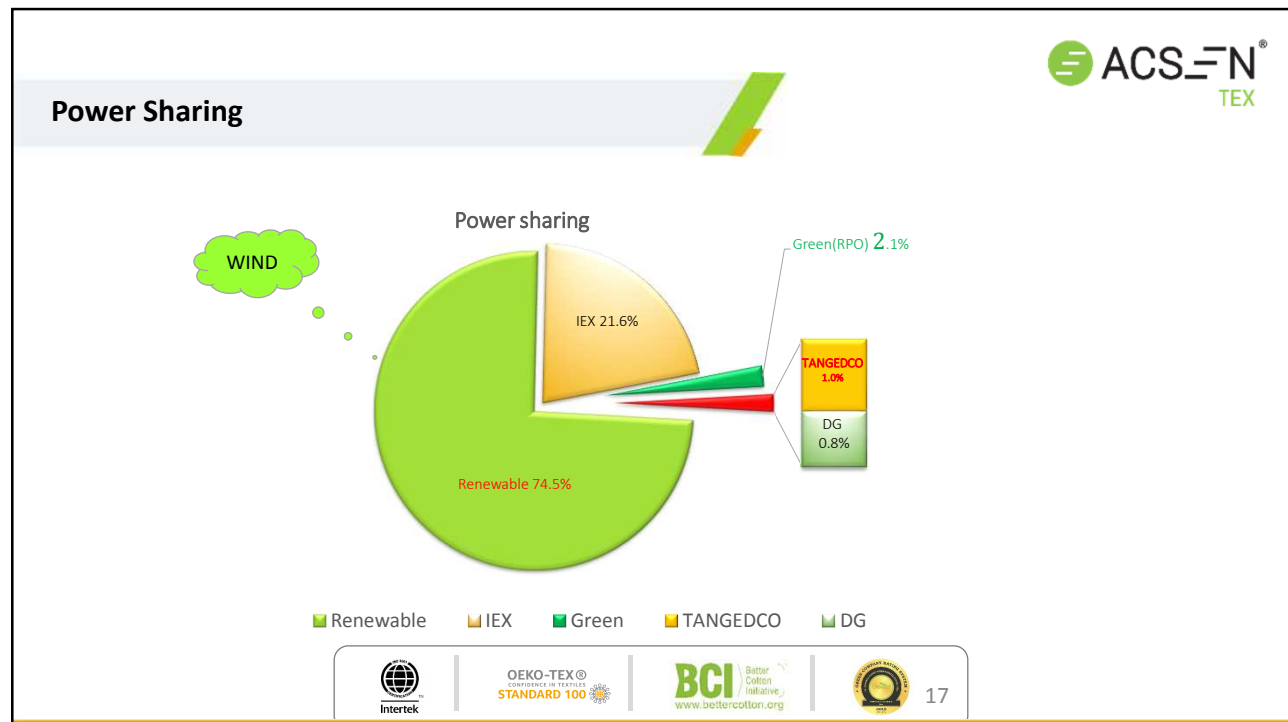
✓ Usages Rain water 6508 KL & % is 45%

✓ In House water recharged Is 4035 KL 27%

✓ Beyond Fence recharged is 4155 KL 28 %

✓ Net ground water Recharged is 55%

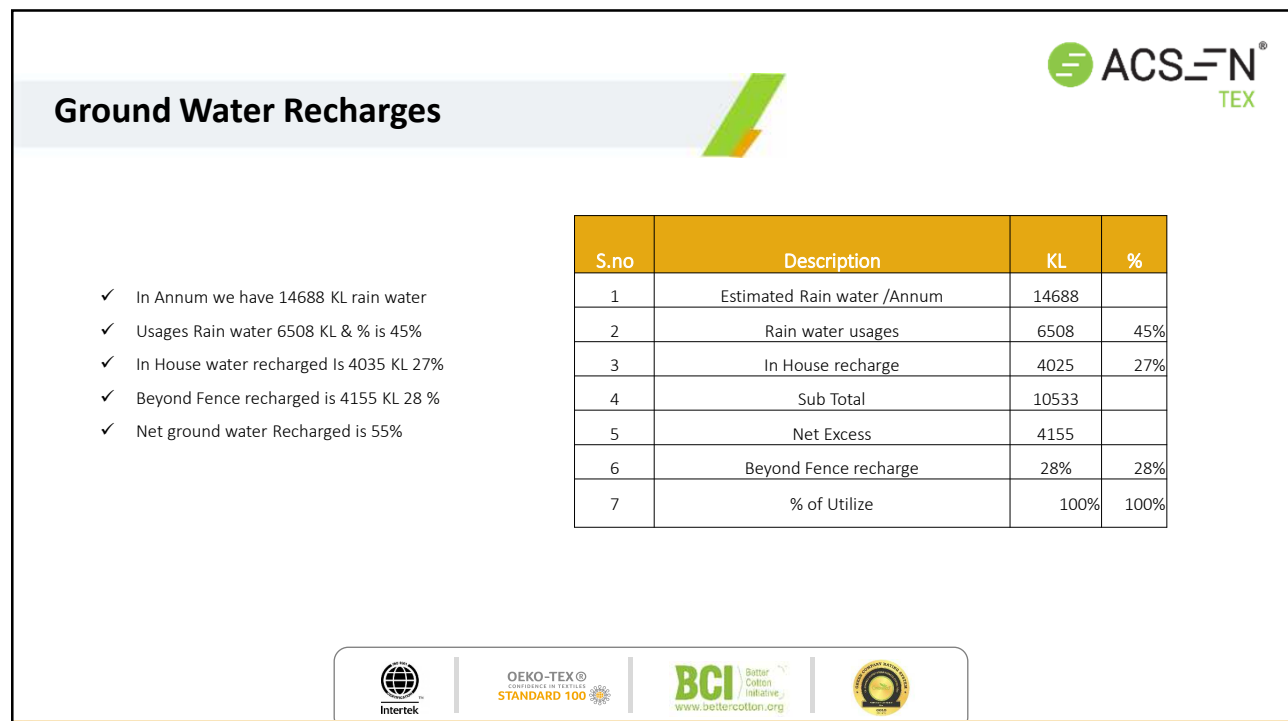| S.no	Description	KL	%
1	Estimated Rain water /Annum	14688	
2	Rain water usages	6508	45%
3	In House recharge	4025	27%
4	Sub Total	10533	
5	Net Excess	4155	
6	Beyond Fence recharge	28%	28%
7	% of Utilize	100%	100%

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Beyond The Fence activities

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Manivilundhan Lake

Name of Project   :
Manivilundhan Lake

Address : Thalaivasal, Attur

Salem

Latitude   : 11 36' 00"

Longitude : 78 45' 23"

Registered Ayacut : 67.72

Catchment area   : 0.79 Sq. Miles Hectare

: 5.13 Sq. Miles Combine

Water yield   : 33.45 Mcft   (1Mcft =283.16 Lakhs Ltrs)

Capacity of lake   : 8.84 Mcft (2503.13 Lakhs Ltrs)

Present Depth of the Lake :   2.47 M

Present capacity of the Lake : 8.84 Mcft (2503.13 Lakhs Ltrs

Proposed Depth of the Lake   : 3.47 Mcft

Proposed capacity   : 12.41 Mcft (3516.54 Lakhs Ltr

Increased the capacity   : 1013.41 Lakhs Ltrs

Our annual Fresh water Consumption /year is 33.76 Lakhs Lt

Our Proposed recharge is 1:300

Lake Number of Filling will be 2 times/year

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Thank you!!!

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