

*22nd National Energy Award for Excellence in
Energy Management - 2021*



Kacheguda Railway Station Building

Shri. A. Koteswara Rao

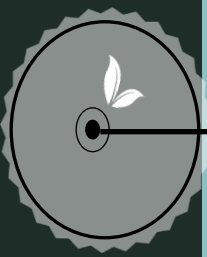
FIE, DCM, C.Engg(I), IRSEE

Senior Divisional Electrical Engineer,
Hyderabad Division, South Central Railway.

Brief introduction of Kacheguda Station Building

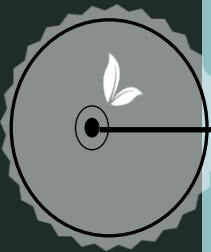


- Kacheguda Station is one of the important station on Hyderabad division located in the heart of the twin cities of Hyderabad and Secunderabad.



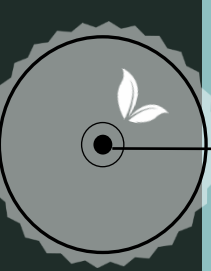
Brief introduction of Kacheguda Station Building

- Constructed in 1916, by the Nizam of the erstwhile Hyderabad State, this Station was the Headquarters of the then Nizam's Guaranteed State Railway.
- This Station handles 67 pairs of Daily trains with an average footfall of 44,000 passengers per day.
- It has received **14th Rank at all India level in Swachh Rail Swachh Bharat Cleanliness assessment** of A1 and A category stations by the 3rd party audit by Quality Counsel of India during 2018.
- This station was bestowed with the **INTACH Heritage Award in 2004** for its architecture.
- It was awarded "**GOLD rating**" by IGBC.
- It was certified with **ISO-14001:2015 for Environmental Management System.**

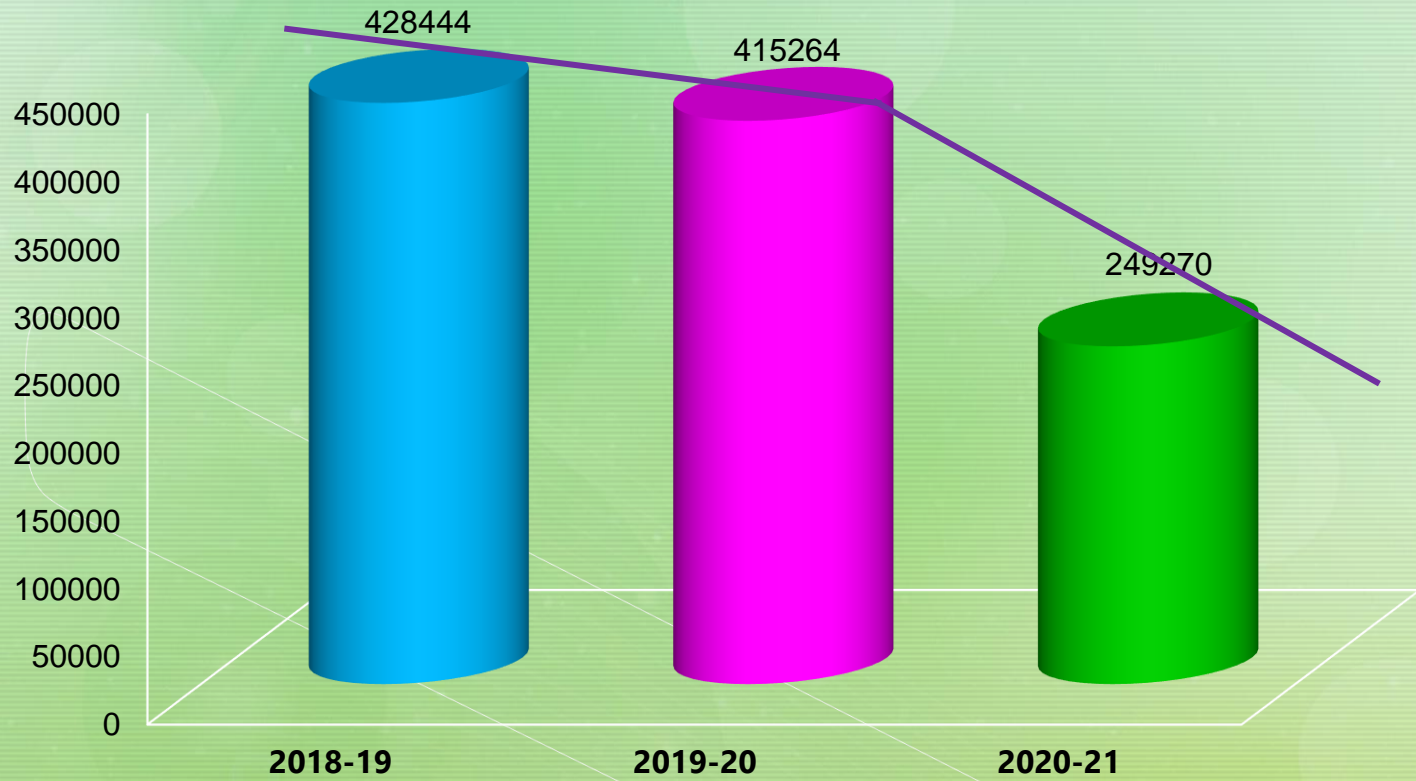


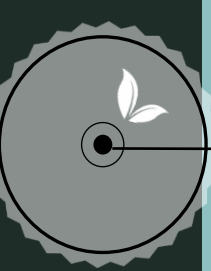
Energy Consumption Overview

Description	2018-19	2019-20	2020-21
Purchased from Utility (kwh)	82574	0	0
Generated through DG set (kWh)	870	664	530
Generated through Solar Plant (kWh)	345000	414600	248740
Total Consumption (kWh)	428444	415264	249270
Total Built-up area (sq.mt)	41521	41521	41521
Specific Energy Consumption (kWh/sq.mt)	10.32	10.00	6.00



Comparison of Consumption for the last 3 years

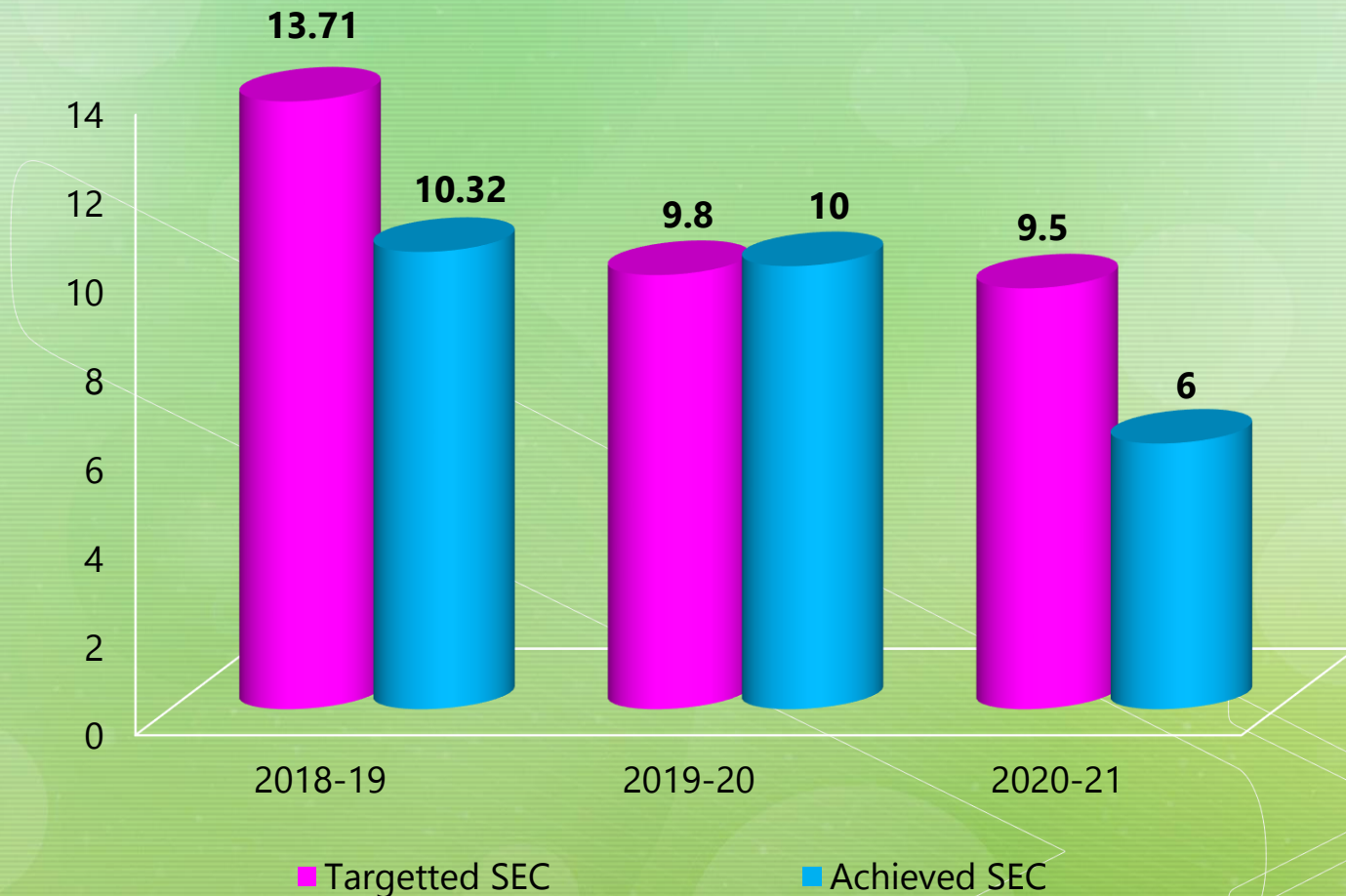




Internal Benchmarking (SEC)

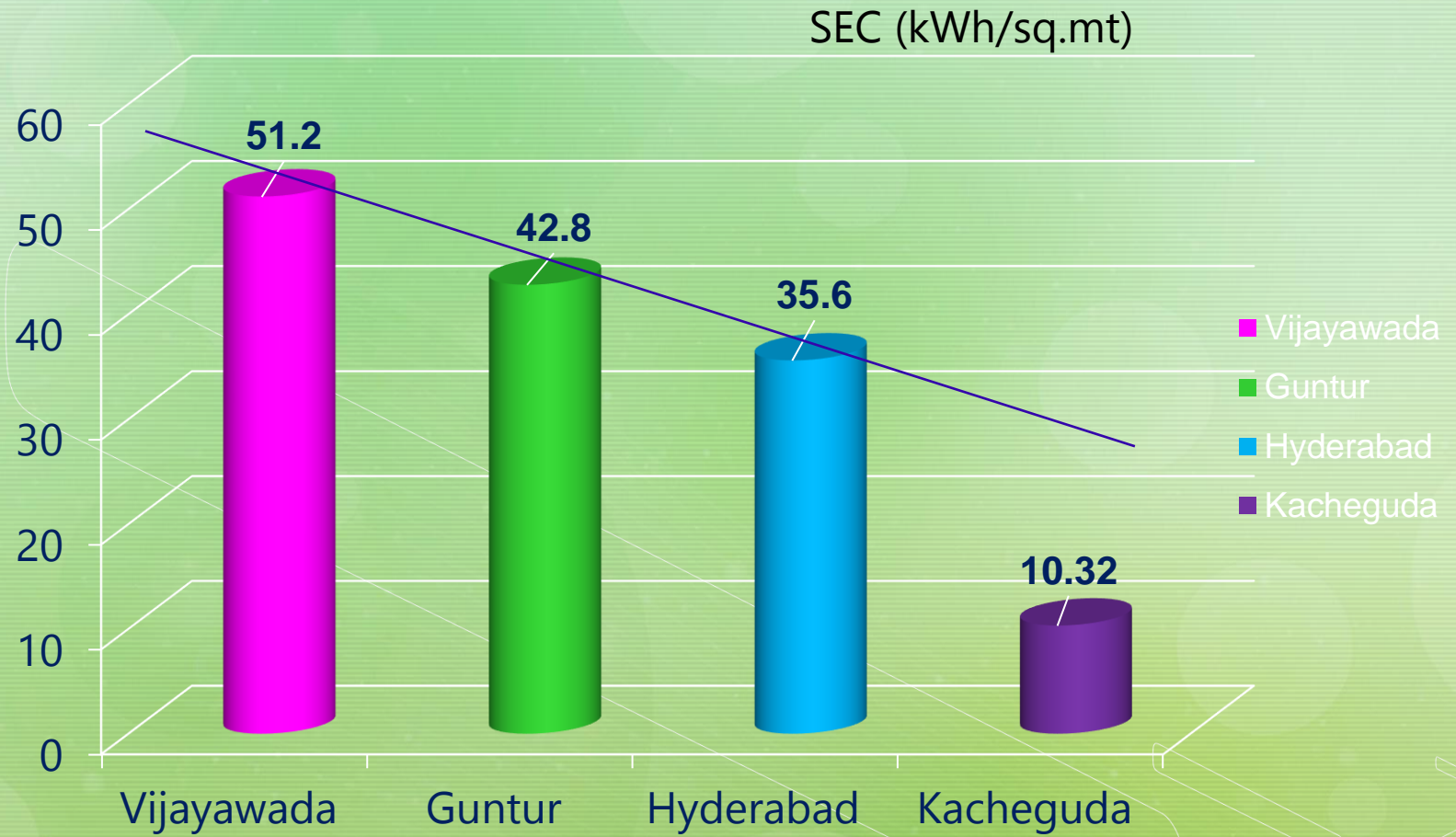
5% reduction in preceding year's SEC as assigned by Railway Board.

SEC (kWh/sq.mt)



Information on Competitors, National & Global Benchmark

Direct Competitors and National Benchmarking



Data obtained from earlier CII Energy Awards presentations.

Road map to achieve Global Bench Marking





**EnCON Projects Implemented
from 2018-19 to 2020-21**

Energy Conservation Projects implemented in 2018-19

Sl. No	Name of the Item	Savings in Lakh Rs.	Investment in Lakh Rs.	Payback Period
1	Solar Power Plant 400kWp	10.39	-	-
2	5 star rated Ceiling fans	2.92	9.25	3.2
3	Fully LED Lit Conversion	7.59	12.98	1.7
4	Energy Savers for AC units	0.35	0.56	1.6

Energy Conservation Projects implemented in 2019-20

Sl. No.	Description	Savings in Lakh Rs.	Investment in Lakh Rs.	Payback Period
1	Energy Efficient 5 star rated AC	0.39	1.80	4.6
2	Occupancy Sensors for Lighting	1.29	1.35	1.1
3	Super Energy Efficient BLDC pumps for Quick Watering facilities	1.91	2.34	1.2



Energy Conservation Projects implemented in 2020-21

Sl. No	Name of the Item	Savings in Lakh Rs.	Investment in Lakh Rs.	Payback Period
1	Energy Efficient type Inverter AC	0.06	2.80	5.42
2	Bifurcation of 30% & 70% fans circuits	1.20	0.80	0.70



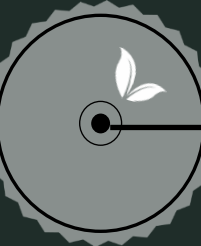
INNOVATIVE PROJECTS IMPLEMENTED



Innovative Projects implemented

Sl. No.	Name of the Project	Year of Implementation	Investment in Lakh Rs.	Savings in Lakh Rs.
1	Provision of Energy efficient BLDC fans i.e., adopting of super energy efficient fans.	2018-19	9.25	2.92
2	Provision of 5 star rated energy efficient Inverter type AC units which uses eco friendly refrigerant (R-410A).	2018-19	6.48	1.26
3	Energy Efficient BLDC pumps for Quick watering.	2019-20	2.34	1.98
4	Bifurcation of 30% & 70% fans circuits.	2020-21	0.80	1.25

100% LED Lighting



Energy Efficient BLDC fans & Inverter type AC units

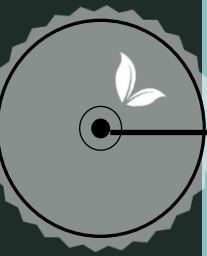


Utilization of Renewable Energy Sources

400 kWp On Grid Solar Power Plant

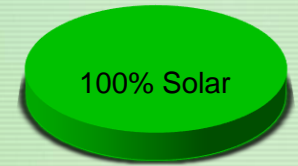


Utilization of Renewable Energy Sources



Energy Consumption analysis for the year 2020-21				
Description	Utility Consumption	DG Generated	Solar Generation	Total Consumption
Units	0	530	248740	249270
% of Total Consumption	0	0.21	99.79	--

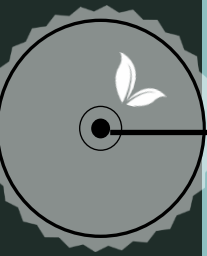
Energy Consumption Pattern



100% of the Kacheguda station consumption is met by renewable energy sources i.e., 400kWp SPV Plant.

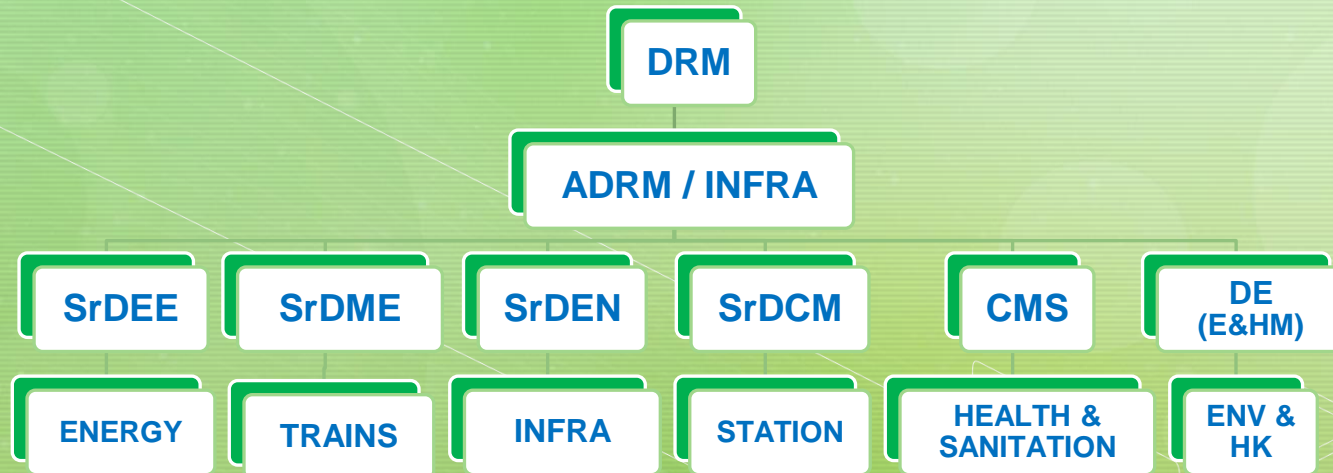
First A1 Category Energy Neutral Station over Indian Railways

Team work, Employee Involvement & Monitoring

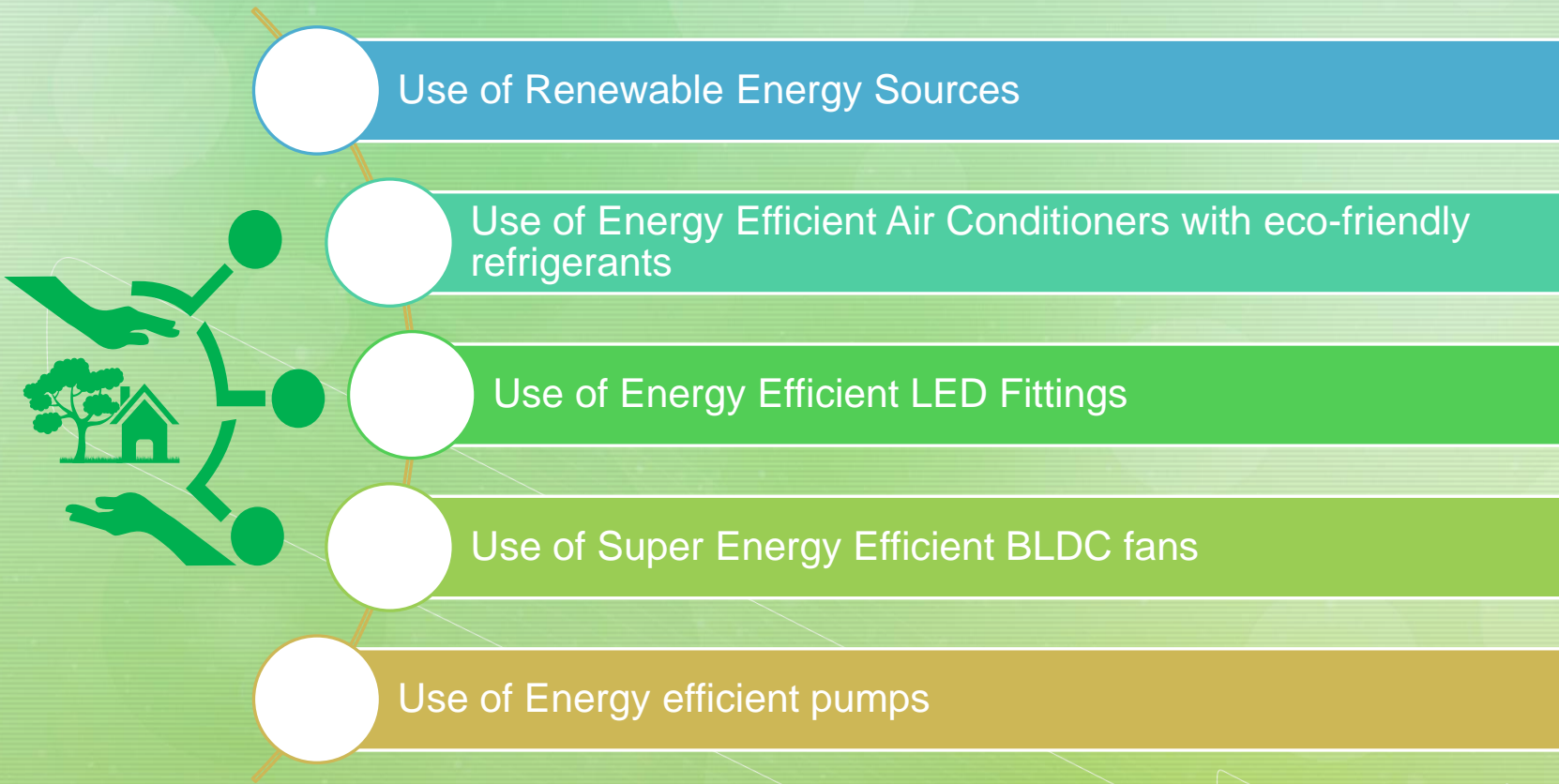
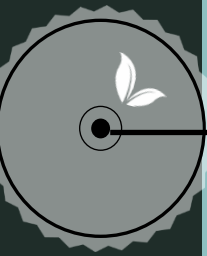


Green Mission Steering Team

- ✓ Committee of 'Service Improvement Group' is in place for regular monitoring of implementation, Operation & Maintenance of existing green features at station, consisting of ADRM(I) & branch level officers who inspect the KACHEGUDA station on regular basis.



Green Supply Chain



Waste Management

- The solid waste at this station is being segregated at source itself by provision of bifurcated collection of Biodegradable waste and Non-biodegradable waste through 173 numbers of dust bins on all the five platforms.
- 3 Nos. Plastic Pet Bottle Crushing machines installed. The plastic waste is collected through plastic bottle crushing machines is being disposed to authorized Plastic Recycled agency.

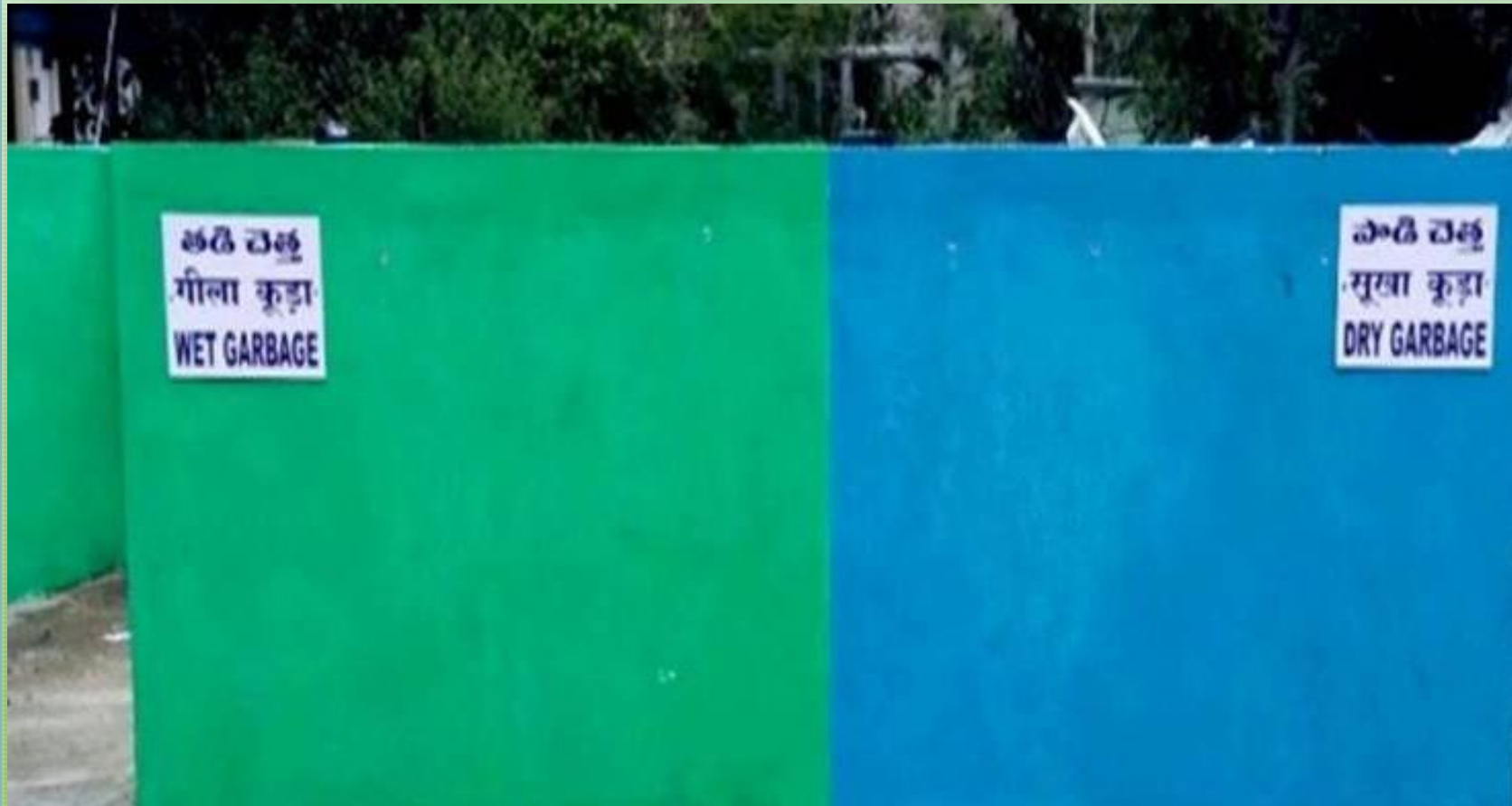
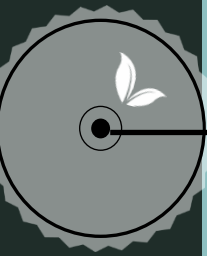


Solid Waste Management

- This station is installed with one De-composting machine and it is producing 100 kg to 120 kg high quality organic manure per week.
- This generated manure is used for the gardens at office premises and colonies.



Separation of Dry Waste & Wet Waste



Automatic Coach Washing Plant



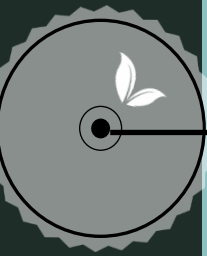
Sewage Water Recycling Plant – 270 KL Capacity



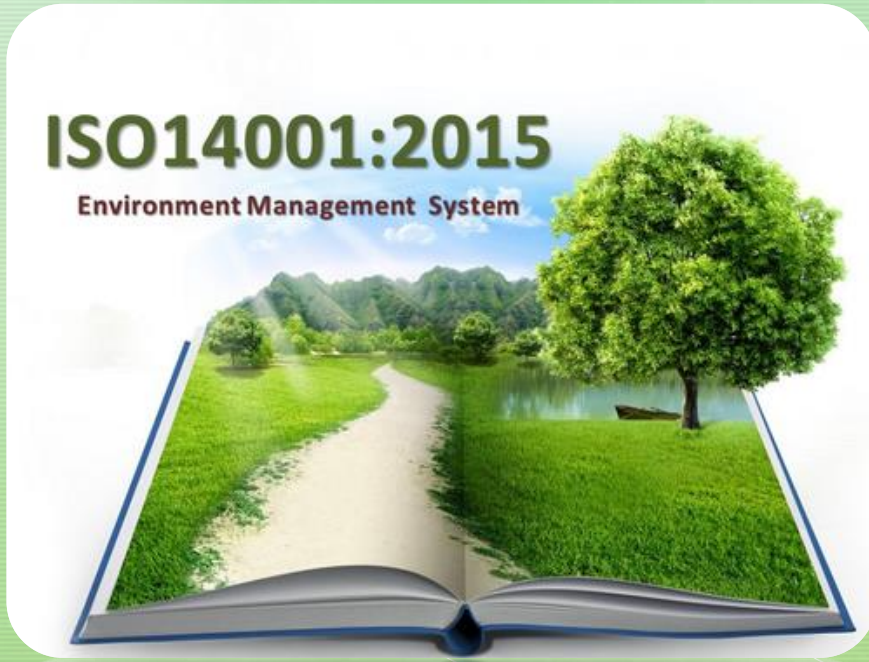
**Implementation of ISO 14001/ Green Co/
IGBC rating**

IGBC Green Rating - Gold





ISO 14001:2015 Certification



DNV·GL

MANAGEMENT SYSTEM CERTIFICATE

Certificate No: 288659-2019-AE-IND-UKAS Initial certification date: 25 November 2019 Valid: 25 November 2019 - 24 November 2022

This is to certify that the management system of
KACHEGUDA RAILWAY STATION
 Nimboliadda, Kacheguda, Hyderabad - 500027, Telengana, India

has been found to conform to
 the **Enviornmental management System** standard:
ISO 14001:2015

This certificate is valid for the following scope:
**Providing services including Housekeeping and Amenties for
 Railway station maintenance**

Place and date:
 Chennai, 25 November 2019

For the issuing office:
 DNV GL - Business Assurance
 ROMA, No. 10, GST Road, Alandur,
 Chennai - PIN - 600 016, India

Sivadasan Madiyath
 Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.
 ACCREDITED UNIT: DNV GL Business Assurance UK Limited, 4th Floor, Vivo Building, 30 Stamford Street, London, SE1 9JZ, United Kingdom.
 TEL: +44(0)203 226 4000. www.dnvgl.co.uk



Sivadasan Madiyath
Management Representative

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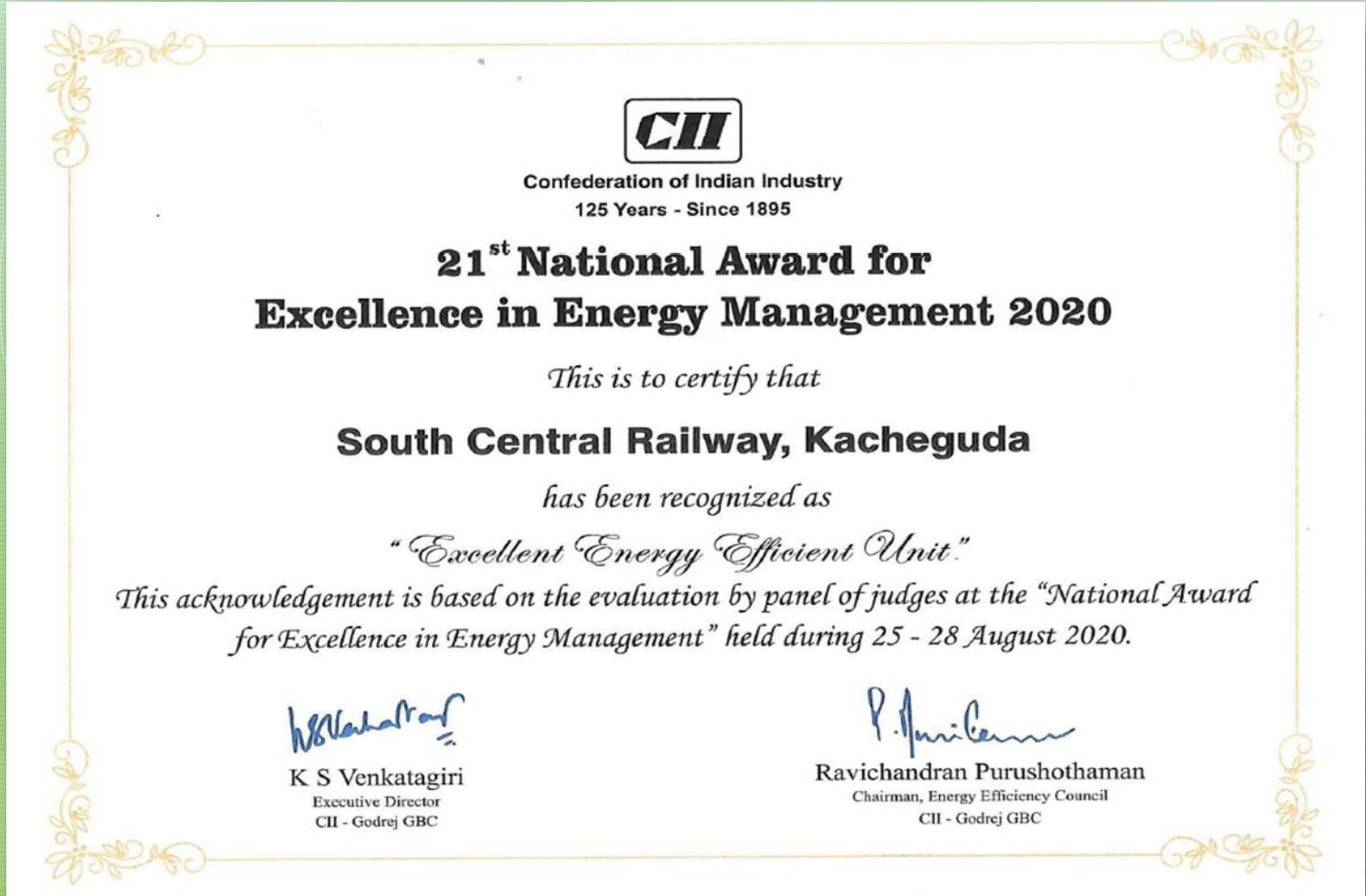
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Awards & Achievements

21st National Awards for Excellence in Energy Management - 2020

Bagged **Excellent Energy Efficient Unit** Award



NEC Awards 2019 - Certificate of Merit



National Energy Conservation Award

This commendation certificate is awarded to

Kacheguda Heritage Building

Secunderabad (Telangana)

in appreciation of their efforts in

Energy Conservation in the

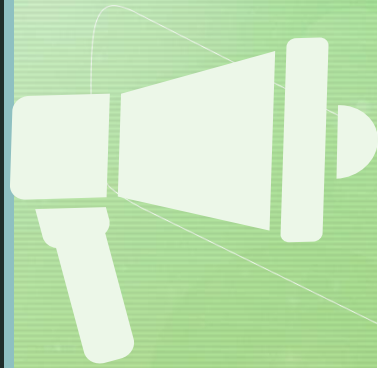
CPWD, PS&ED & State PWDs Sector

for the year 2019

*Ministry of Power
New Delhi
14 December, 2019*

[Signature]
*Secretary to the
Government of India*







Thank you

Contact Details - Cell No. 9701372300

email: srdeemhyb@gmail.com

