

**22<sup>nd</sup> National Award for Excellence in Energy  
Management GMR Hyderabad International Airport  
Ltd.**

Mr. Prasanna K Potdar – HOD Engineering & Technical Services  
Mr. Vijay Rathod – Head Terminal (EA)  
Mr. Bixam Bhukya – Manager- Electrical

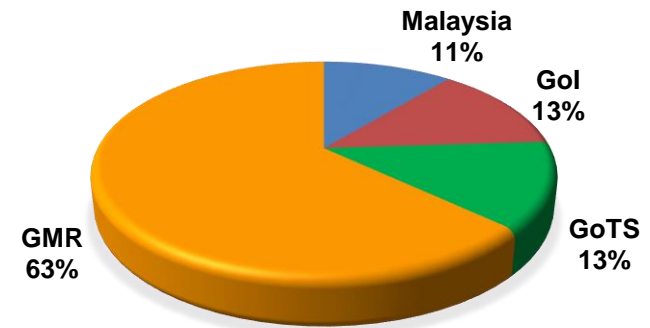


# Company Profile



***Our Vision : "GMR Group will be an institution in perpetuity that will build entrepreneurial organizations making a difference to society through creation of value"***

- Based on the PPP model & structured on –BOOT; Project Completed in Record time of 31 Months
- Commenced Operations -March 23, 2008
- Design Capacity :-
  - Terminal -12 Million Passenger Per Annum
  - Cargo -1.5 Lakh MT /Annum respectively
- Present Operation :-
  - Terminal -21+ Million Passenger Per Annum (Pre-COVID)
  - Cargo -1.5 Lakh MT /Annum respectively
- Currently under Expansion :- 40 MPPA & 2.5 Lakh MT/Annum



# Building Specifications



**Natural lighting during day through Façade and Temple leaf structure in the roof.**



**Curved & Corrugated, structure around the Passenger Terminal provides resistance from sunlight.**

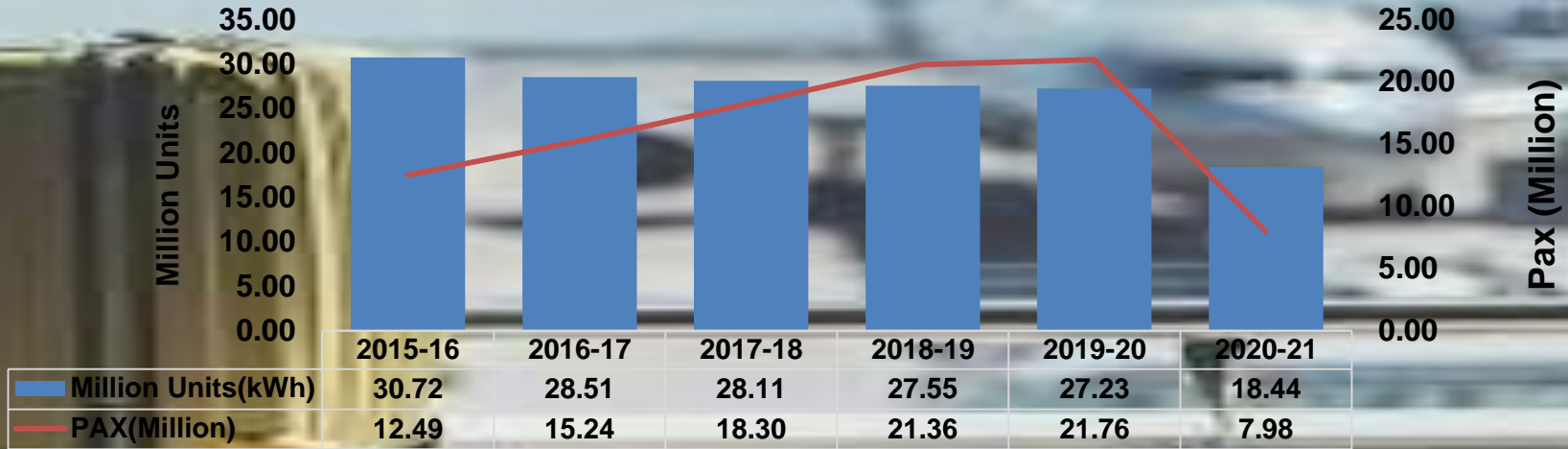


**Good thermal insulation properties @ Terminal glass Façade: U-value =  $1.4 \text{ W/m}^2\text{K}$ , SC = 0.47**

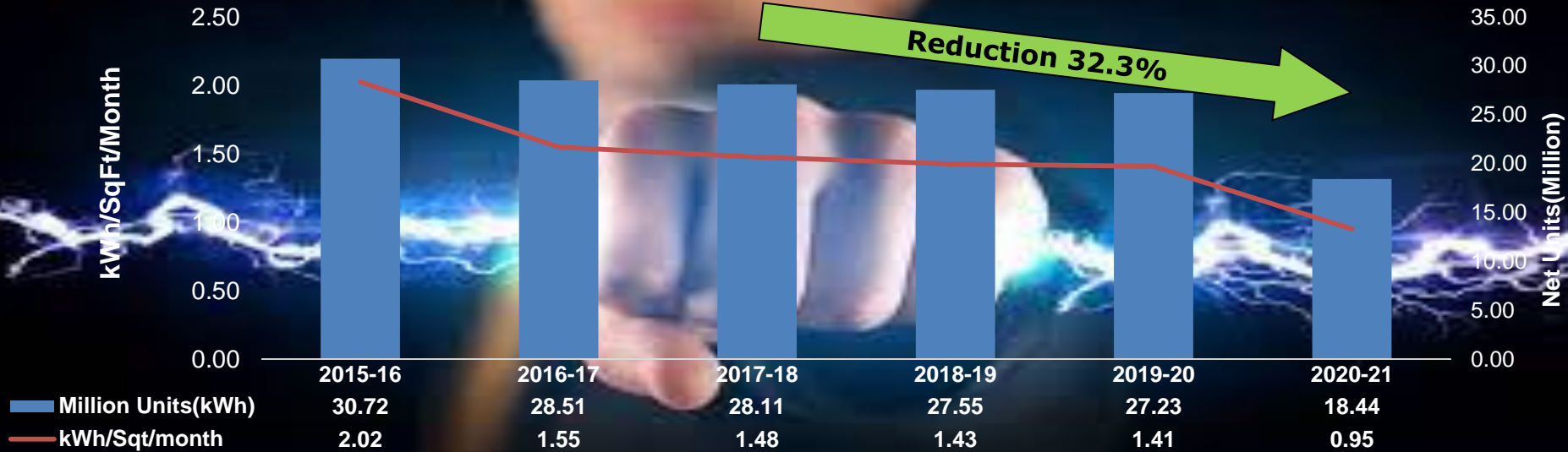
# Passenger Growth, Energy Usage & Specific Energy Consumption



## Pax & Net Units



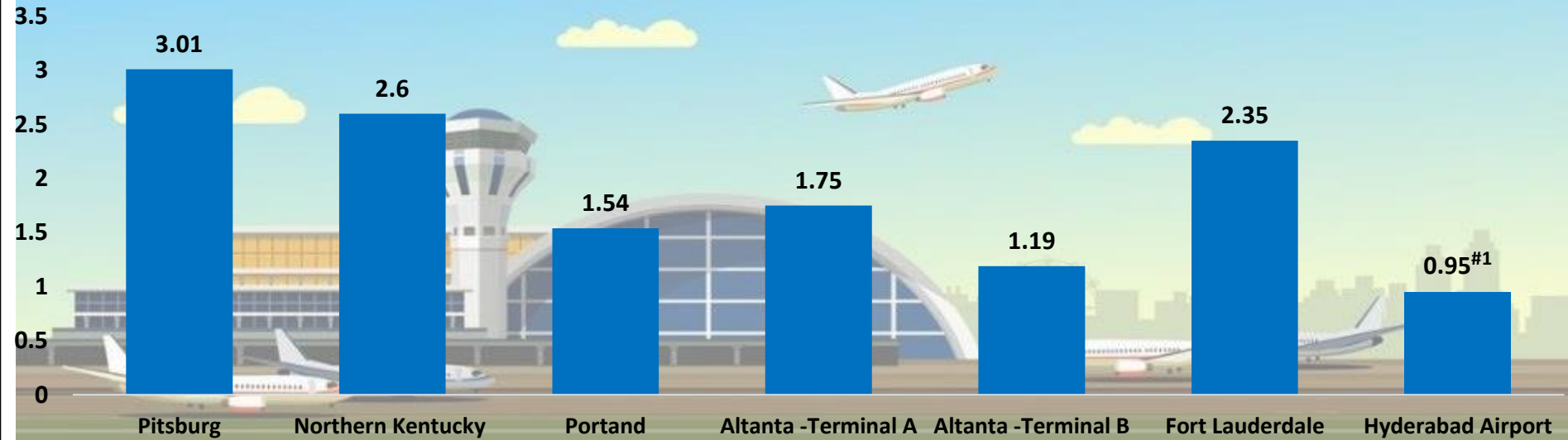
## Net Units and kWh/SqFt/Month



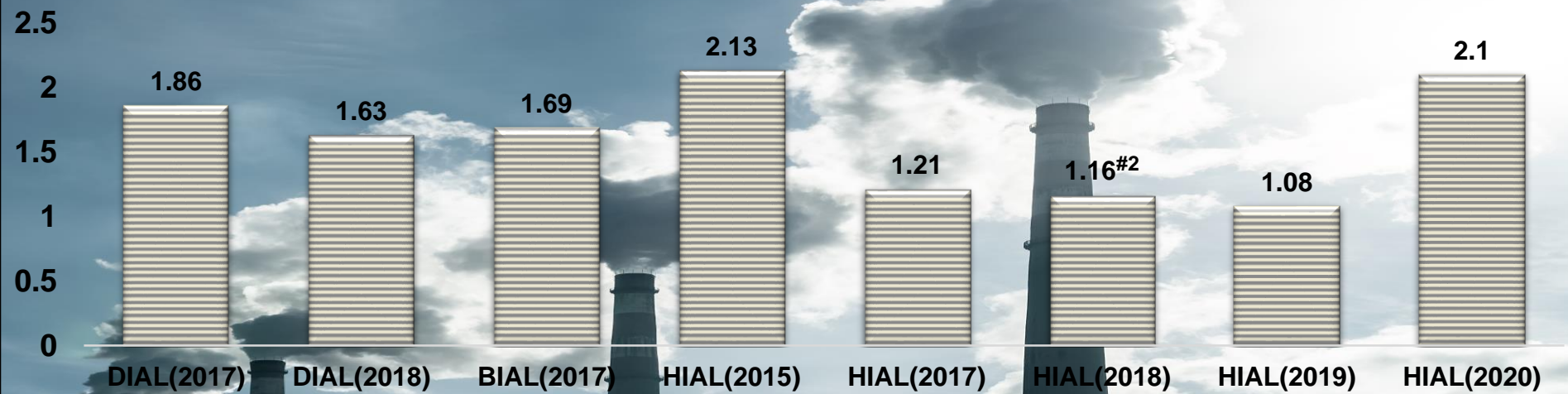
# Benchmark – Power & Emissions



## Specific Energy Consumption (kWh/Sq.ft/Month)



## kgCO<sub>2</sub>e/Pax



\*Source –Internet & Internal Source #1 SEC value is inclusive of solar power generation #2 typo error corrected

# Roadmap for being Global Leader in Energy Efficiency



**FY 22**  
Continuous Improvement  
Online Power & Water Management System



# Key EnCon Projects in Past 3 Years



#	Energy Saving Project	FY	Investment Million INR	Saving MU	Savings Million INR
1	UV Lamp in AHU (Phase 1)	2018-19	0.33	0.21	1.52
2	Natural Coagulant in Sewage Treatment Plant	2018-19	0.22	0.02	0.79
3	Automatic Tube Cleaning System (Phase 1)	2018-19	POC for Single Chiller Completed		
4	Upgrading to energy Efficient PAC – 3 Numbers of Unit	2019-20	3.6	0.34	2.53
5	Upgrading the Domestic Water pump to Energy efficient pumps – ALS	2019-20	2.6	0.12	0.89
6	Prepaid Energy meters - PTB	2019-20	9.2	0.0	0.0
7	Automatic Tube Cleaning System (Phase 2)	2019-20	6.5	0.23	1.64
8	Power optimization by Scheduled Operation of AHU & Lights	2020-21	0.0	2.82	20.59
9	Operation of New Energy Efficient Sewage Treatment Plant	2020-21	17.5	0.11	0.78
10	Secondary Runway AGL Upgradation & LED Conversion	2020-21	50.0	0.09	0.69
11	Cooling Tower Efficiency enhanced by Upgradation	2020-21	2.45	0.05	0.35
12	Conversion of SV lamps to LED on Main Access Road	2020-21	3.16	0.04	0.28
13	LED Retrofit (36 W to 20 W) - Passenger Terminal Building	2020-21	0.08	0.04	0.26

Financial Year	Investment Million INR	Saving Million Unit	Savings Million INR	Payback (Months)
2018-19	133.5	1.61	27.1	59
2019-20	23.8	0.78	5.72	49
<b>2020-21</b>	<b>73.2</b>	<b>3.14</b>	<b>22.95</b>	<b>38</b>

## EnCon Projects Implemented in FY2020-21



### ⑩ Power optimization by Scheduled Operation of AHU & Lights

- Zero Investment
- Savings of 28.21 Lakh kWh



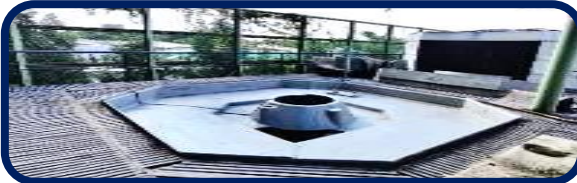
### ⑩ Operation of New Energy Efficient Sewage Treatment Plant

- Investment of 17.5 Million INR
- Savings of 1.06 Lakh kWh



### ⑩ Secondary Runway AGL Upgradation & LED Conversion

- Investment of 50.00 Million INR
- Savings of 0.94 Lakh kWh



### ⑩ Cooling Tower Efficiency enhanced by Upgradation

- Investment of 2.45 Million INR
- Savings of 0.48 Lakh kWh



### ⑩ Main Access Road Street lights: Conversion of SV Lamps to LED

- Investment of 3.16 Million INR
- Savings of 0.38 Lakh kWh



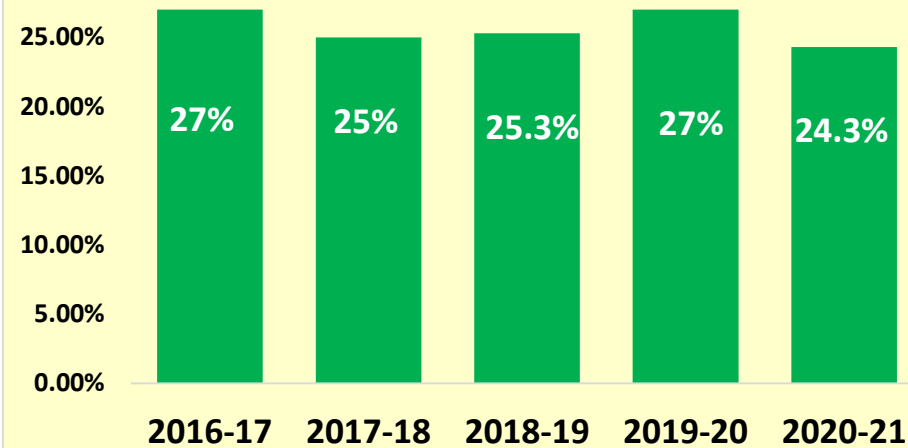
### ⑩ LED Retrofit (36 W to 20 W) - Passenger Terminal Building

- Investment of 0.08 Million INR
- Savings of 0.36 Lakh kWh



# Utilization of Renewable Energy Sources

### Solar Contribution(%) in Net kWh



Technology	Type of Energy	Location	FY	Installed Capacity (MW)	Generation (million kWh)	% of overall electrical energy
Solar PV	Electrical	Onsite	2016-17	5 MW	7.67	27%
			2017-18	5 MW + 5 MW	7.02	25%
			2018-19	5 MW + 5 MW	6.99	25.3%
			2019-20	5 MW + 5 MW	7.31	27%
			2020-21	5 MW + 5 MW*	6.02	24.3%

\* Commissioned in July 2021 after approval from relevant authorities

# EnCon Project 01: Power Optimization by Scheduled Operation of AHU & Lights



## Power Optimization by Scheduled Operation of AHU & Lights

Due to **COVID** pandemic & travel restrictions, there was considerable reduction in traffic movement. To cope up with this new challenge, we operated our HVAC, other systems & Lighting based on Passengers movement without impacting operations & Passenger's overall experience.

**Replication Potential :- Yes**

**Savings Achieved: 28.21 Lakh Units**

# EnCon Project 02: Operation of New Energy Efficient Sewage Treatment Plant



## Operation of New Energy Efficient Sewage Treatment Plant

Commissioned new energy efficient 1350 KLD sewage treatment plant which is of extended aeration technology and ultra-filtration tertiary treatment system.

This project is helped in saving 1.06 L units by using energy efficient equipment.



**Replication Potential :- Yes**

**Savings Achieved: 1.06 Lakh Units**

# EnCon Project 03: Secondary Runway AGL Upgradation & LED Conversion



## Secondary Runway (27R-09L) upgradation from Simple Approach to CAT-1 Approach Lighting System & LED Conversion

Earlier Secondary Runway had simple approach and could be operated only when visibility @ 3000 meters and above. Post upgradation to CAT-1 approach lighting system, Runway is being operated with visibility @ 1750 meters and above.

With a strategic objective to convert the airport in to 100% LED Airport, the Secondary Runway Lighting System was further upgraded with energy efficient LED Lighting in Aeronautical Ground Lighting Systems by ensuring the standards prescribed by the International Civil Aviation Organization (ICAO) and Directorate General of Civil Aviation (DGCA).

**Replication Potential :- Yes**

**Savings Achieved: 0.94 Lakh kWh**

# EnCon Project 04: Cooling Tower Efficiency enhanced by Upgradation



## Cooling Tower Efficiency enhanced by Upgradation

Existing Cooling towers have been in operation since the commencement of Airport. Recently, performance of the CTs was observed to be deteriorating, Delta Temperature was observed to be falling significantly.

After brainstorming with lead subject experts, identified solution with technologically advanced, higher efficiency motors. **Installed the same for 02 CTs as POC without any operational impact.**

**This project helped in reduction of power consumption the by 0.48 Lakh kWh.**



**Replication Potential :-Yes**

**Savings – 0.48 Lakh kWh**



## **Conversion of SV Lamps to LED of Main Access Road**

To ensure safe transport to passengers, Airport Staff and to conserve energy, this project was accomplished in very short duration.

Replaced 221 Nos of SV Lamps (250W) to LED Fixtures (210W). This project helped in achieving savings of 0.38 Lakh Units.

### **Advantages:-**

- Energy Conservation
- Aesthetics Improvement
- Enhanced Safety of all the commuters
- Visibility of cameras recording improved.
- Illumination levels improved

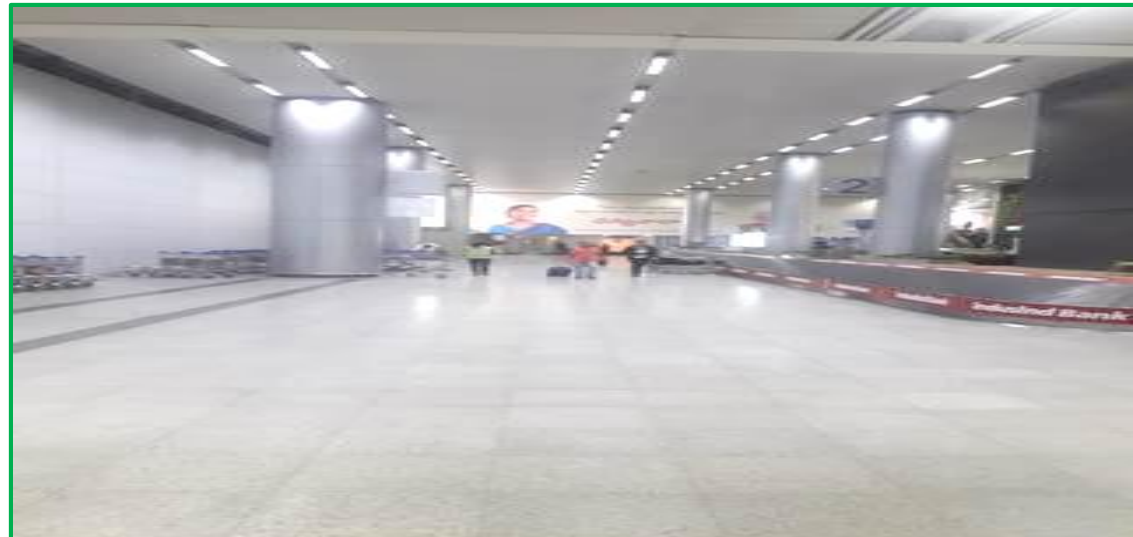
**Replication Potential :- Yes**

**Savings Achieved:- 0.38 Lakh kWh**

## LED Retrofit (36W to 20W) at Passenger Terminal Building

In view of achieving better illumination, to improve energy efficiency & to improve passenger experience, **converted 500 No's conventional lights to LED lights** at Arrivals baggage Reclaim Area.

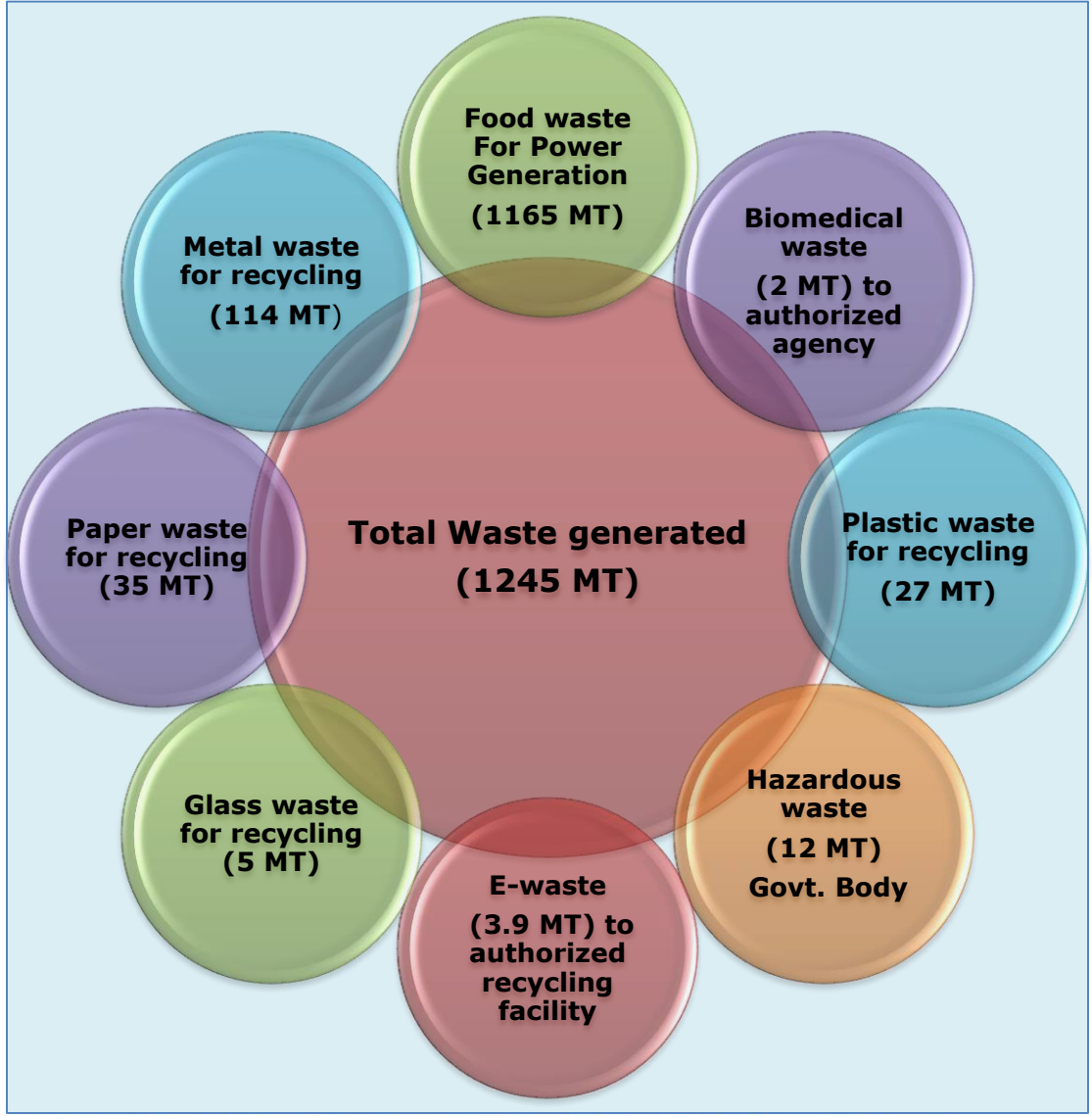
Maintained Lux level of the area as per standards by retrofitting the LEDs in the old fittings.



**Replication Potential :-Yes**

**Savings Achieved: 0.36 Lakh kWh**

**MSTC Certified Vendors**  
**Indian Tar Coal Company & NAS Oil**





# KAIZEN- EnCon Innovative Project by Technicians



**Equaliser line modification works:** Resolved overflow issue with the enhanced equalizer capacity. Improved the availability of the cooling towers.



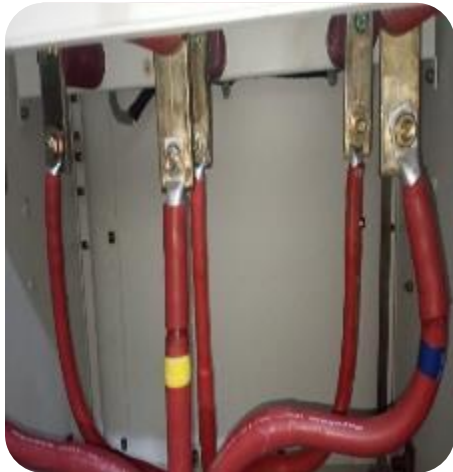
**Internal coil cleaning of AHU cooling coils:** Observed an overall increase in average delta T of chilled air across the coil by 0.75Deg

# KAIZEN- EnCon Innovative Project by Supervisors



At Green Wall at Arrivals Belts area, existing 55W Lights were replaced with 27.5W Energy Efficient LED lights.

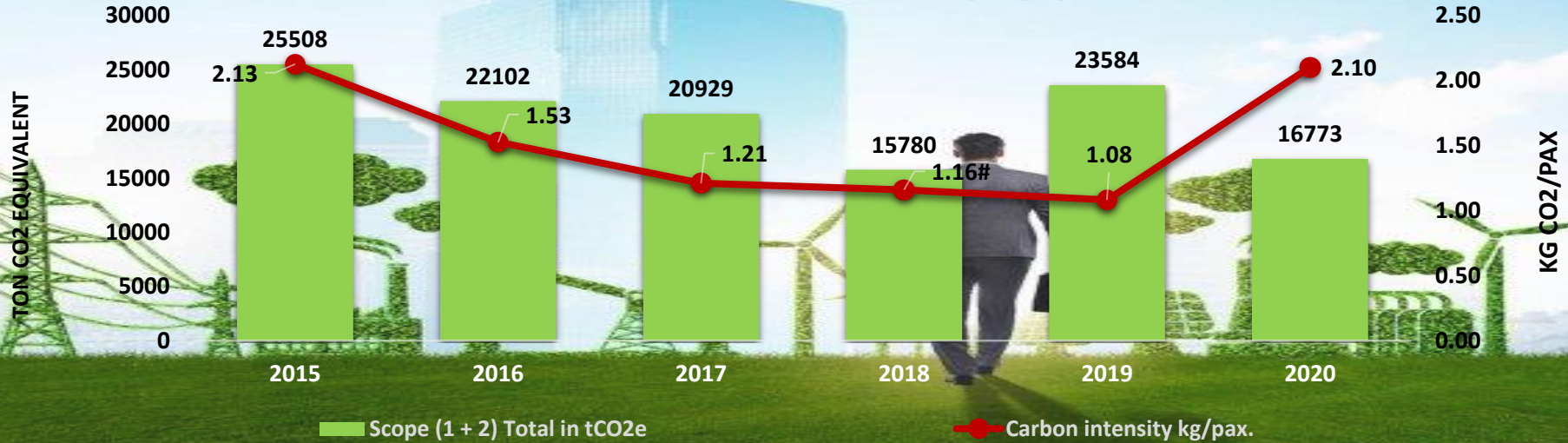
To create redundancy & to improve passengers experience at Passenger Transport Centre (PTC), team installed an unutilized UPS of 30 KVA capacity along with electrical modifications by in-house team.



Redundant Power Source made available for various landside buildings. Backup source was provided with minimum modifications to distribution system. This resulted in saving 10.53 KL of Diesel amounting to Rs 10.13 Lakhs/annum.

# GHG Emissions

## Scope 1 & 2 Vs Carbon Intensity kg/pax



## Indirect GHG emissions(Scope 3)



# GHG Inventorisation & Energy Policy



**DNV·GL**

## INDEPENDENT VERIFICATION STATEMENT

**Introduction**

DNV GL Business Assurance India Private Limited (DNV GL) has been commissioned by the management of GMR Hyderabad International Airport Limited (GHIAL), Shamshabad, Hyderabad – 500 405, Telangana, India (The Company) to carry out verification of GHIAL's greenhouse gas (GHG) assertion based on the requirements of Airport Carbon Accreditation (ACA) Guidance Document, Issue 10, September 2016. The reasonable level of verification of GHG assertions was carried out for the period from 1st January 2016 to 31st December 2016. This verification applies a + 5% materiality threshold for errors and omissions.

GHIAL is responsible for the collection, analysis, aggregation and presentation of data and information. Our responsibility of performing this work is to the management of GHIAL only and in accordance with terms of reference agreed with the Company. The verification engagement is based on the assumption that the data and information provided to us is complete, sufficient and true. DNV GL disclaims any liability or co-responsibility for any decision a person or entity would make based on this verification statement. The verification was carried out during February/April 2017.

**Scope, Boundary and Limitations of Assurance**

The scope of work agreed upon with GHIAL includes the following:

1. Verification of the reported GHG Inventory (Scope 1, Scope 2 and Scope 3 GHG emissions) in accordance with the requirements of ACA Guidance Document using the principles of ISO 14064-3 (2006) covering the period 1 January 2016 to 31 December 2016.
2. Site visits to GHIAL facilities at Hyderabad, which included Terminal services, arrival & departure terminals, and aircraft transportation department, fuel farms, flight kitchens, GMR town-ship, concessionaires, Airport Operations Control Centre (AOCC) and the Corporate Office of GHIAL for verification of Greenhouse gas data, and related system for GHG data aggregation.
3. Review of the company's internal procedures, protocols, processes, management approach and controls related to the collection and collation of the GHG Inventory data, presented to us in the form of excel worksheets.
4. The Scope 3 categories comprise: 1) Fuel (Jet/Air) used for transportation of GHIAL vehicles and 2) Fuel (Jet/Air) used by the

**BUREAU VERITAS**

**Bureau Veritas Certification**

**GMR HYDERABAD INTERNATIONAL AIRPORT LIMITED**

GMR AERO TOWER, RAJIV GANDHI INTERNATIONAL AIRPORT, SHAMSHABAD, HYDERABAD – 500 105, TELANGANA, INDIA.

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organization has been audited and found to be in accordance with the requirements of the Management System Standard detailed below.

**ISO 50001:2018**  
*Standard*  
*Scope of certification*

**OPERATION AND MAINTENANCE OF PASSENGER TERMINAL BUILDING, AIR SIDE & LAND SIDE FACILITIES**

Original cycle start date:	20 August 2017
Expiry date of previous cycle:	19 August 2020
Recertification Audit date:	03 August 2020
Recertification cycle start date:	20 August 2020

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: 19 August 2023

Certificate No. IND.20.9070GENU Version: 1 Revision date: 20 August 2020

Signed on behalf of BVQI SAS UK Branch  
Jagdishwar N. MAHARAJ  
Quality Management, South Asia  
BUREAU VERITAS CERTIFICATION, South Asia  
INDIA, CHENNAI, CHENNAI, CHENNAI, CHENNAI  
0009

## Public Disclosure on GHG Emission & Energy Policy ISO 50001-2018 Standards

**ऊर्जा दक्षता ब्यूरो**  
(भारत सरकार, विद्युत मंत्रालय)  
**BUREAU OF ENERGY EFFICIENCY**  
(Government of India, Ministry of Power)

150  
YEARS OF  
CELEBRATING  
THE INDEPENDENCE

F.No. BRE/PAT/Buildings/Airport/2019-20/048

2<sup>nd</sup> January, 2020

Ms. Rubina AIL,  
Joint Secretary,  
Ministry of Civil Aviation,  
Rajiv Gandhi Bhawan, Block B, Safdarjung Airport Area,  
New Delhi – 110003  
Ph: 011-24628012

**Subject: Inclusion of Airport sector under PAT Scheme.**

Dear Madam,

This is with reference to the meeting held in your office on 18<sup>th</sup> December, 2019 regarding implementation of PAT Scheme. As per the discussion, we are enclosing the Energy Performance for the Airport sector to capture all energy consumption data for the Airport.

This performa may be sent to all the Airports and they would be requested to fill the performa and submit to BEE office within 15 days. They may also be requested that the officials from BEE will contact them for their support in data collection and implementation of the Scheme.

After receipt of requisite data Technical Committee Meeting may be held in your chairmanship.

This issues with the approval of DG, BEE.

Yours sincerely,

**CERTIFICATE**  
of ACCREDITATION

6 December 2019 - 5 December 2023

This is to certify that Airport Carbon Accreditation, under the administration of WSP, confirms that the carbon management processes at

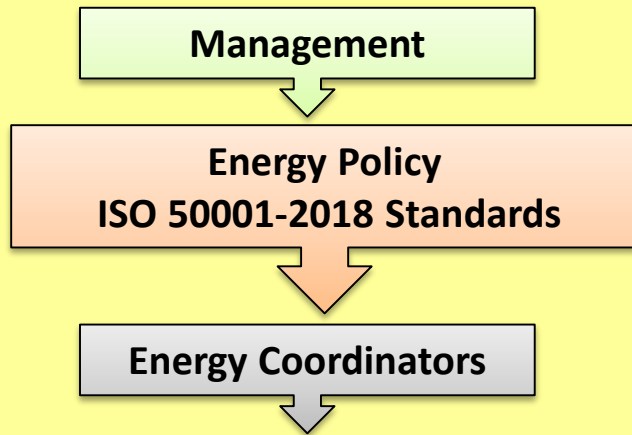
**RAJIV GANDHI INTERNATIONAL AIRPORT**  
implemented by GMR Hyderabad International Airport Ltd.

**HYDERABAD** DEPT. OF CIVIL AVIATION | **GAR**

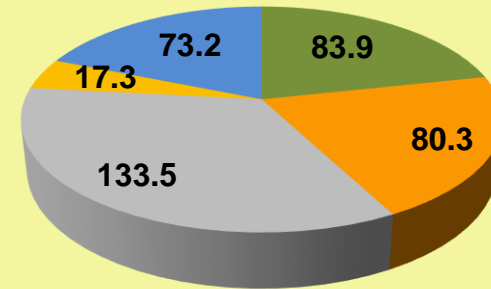
have earned the accreditation level of NEUTRALITY, in recognition of the airport's exceptional work in managing, reducing and compensating all of the CO<sub>2</sub> emissions under its control, as part of the Global airport industry's response to the challenge of Climate Change.

airport carbon

## BEE PAT Scheme & Carbon Neutral 3+



## En Con Investment Million INR



■ 2016-17 ■ 2017-18 ■ 2018-19 ■ 2019-20 ■ 2020-21

## Risk analysis



# Daily Monitoring



## Daily Energy Monitoring Report Chaired by EVP

Rajiv Gandhi International Airport, Shamshabad, Hyderabad			
Daily O&M Report			
Report Date & Time: 0000 to 2359Hrs		Wednesday, 28 July, 2021	
Day Shift :-		Rajesh & Vijay	
Night Shift :-		Gopi & Sankar	
HVAC		Electrical	
Chiller Load (TR)	21674.00	Total Consumption	119000.00
Chilled Water dt (Deg C)	3.36	Gross Consumption PTB (kWh)	69807.60
Condenser Water dt (Deg C)	6.27	Gross Consumption ALS (kWh)	49192.40
Average Ambient temperature ( deg C)	26.80	Solar Generation (MWh)	34.15
Max. Ambient Temp (Deg C)	32.24	Solar Net export HT Mwh	33.85
Water Consumption (Cooling Tower PTB) KL	151.40	DG Yard - Status (Ok/Not Ok)	OK
R.Humidity	74.65%	Serviceability of BMS (Ok/Not Ok)	OK
Serviceability Chiller (Number)	7/7	Power Consumed by PTB Chillers kWh	12937.50
Serviceability AHU (Number)	103/103	Pax Area Lighting Number -Fittings (W /NW )	W
CPM (Chiller Plant Manager) Status	OK	Maximum Demand (MVA)	6.71
IKW-PTB (Incl Secondary)	0.63	Power Consumed by IIDT Chillers kWh	2022.00
IIDT Chiller Load (TR)	2675.74	Power Consumed by NOB Chillers kWh	1410.00
IKW -IIDT	0.76	Power Consumed by PSOB Chillers kWh	1269.70
NOB Chiller Load (TR)	1969.91	Power consumed by IDAT HVAC VRF Units kWh	493.00
IKW-NOB	0.72	Chillers Auxiliaries Consumption - HVAC KWH	3296.30
PSOB Chiller Load (TR)	1725.98	Commercial KVAH	49500
IKW-PSOB	0.74	Industrial KVAH	50960
B/D of equipment (hrs.)	0	Commercial MD(MVA)	2.857
		Industrial MD(MVA)	2.970
Chiller Running Hrs	38.80		0

## Daily MIS Report for AMR Water Meters

HYDERABAD WATER SUPPLY CORPORATION		GAR		GAR		Date:	0-Jan-00
						Time:	00:00hrs to 23:59hrs
Sewage Inflow				Initial Reading	Final Reading	Consumption (KL)	
STP-1 Input	M1		0	0	0		
STP-2 Input	M2		0	0	0		
Total STP Inflow	M1+M2		0	0	0		
Treated Water Output				Initial Reading	Final Reading	Consumption (KL)	
STP-1 Output	M3		0	0	0		
STP-2 Output	M4		0	0	0		
Total STP Output	M3+M4		0	0	0		
STP Efficiency				Efficiency (%)			
STP-1 In-Out Difference	M1-M3		0	0	0		
STP-2 In-Out Difference	M2-M4		0	0	0		
Difference of Inlet-Outlet	(M1-M2) (M3-M4)		0	0	0		
Flushing Water				Consumption (KL)			
Total Treated Water Generation	M3+M4		0	0	0		
Gross Flushing Water Consumption	M5-M6		0	0	0		
Difference of Generation-Consumption	(M3-M5) (M4-M6)		0	0	0		
Flushing Water Line-1				Consumption (KL)			
Flushing Line 1 Consumption		INLET	0	0	0		
Total Sub-Consumption to Flushing Line 1		OUTLET	0	0	0		
Difference of Line 1 to Sub-Consumption		INLET-OUTLET	0	0	0		
Flushing Water Line-2				Consumption (KL)			
Flushing Line 2 Consumption		INLET	0	0	0		
Total Sub-Consumption to Flushing Line 2		OUTLET	0	0	0		
Difference of Line 2 to Sub-Consumption		INLET-OUTLET	0	0	0		
Domestic Water				Consumption (KL)			
Details							
HMWS Intake		INLET	0	0	0		
Total Domestic Water Consumption	Cluster 2	OUTLET	0	0	0		
Difference of Received-Consumption		INLET-OUTLET	0	0	0		
Domestic Water Line-1				Consumption (KL)			
Details							
Domestic Line 1 Consumption		INLET	0	0	0		
Total Sub-Consumption to Domestic Line 1	Cluster 4	OUTLET	0	0	0		
Difference of Line 1 to Sub-Consumption		INLET-OUTLET	0	0	0		
Domestic Water Line-2				Consumption (KL)			
Details							
Domestic Line 2 Consumption		INLET	0	0	0		
Total Sub-Consumption to Domestic Line 2	Cluster 5	OUTLET	0	0	0		
Difference of Line 2 to Sub-Consumption		INLET-OUTLET	0	0	0		
CFR Main Fire Water				Consumption (KL)			
Details							
CFR Main Fire Inlet		INLET	0	0	0		
CFR Main Fire Outlet	Cluster 8	OUTLET	0	0	0		
Difference of Inlet-Outlet		INLET-OUTLET	0	0	0		
CFR Satellite Fire Water				Consumption (KL)			
Details							
CFR Satellite Fire Inlet		INLET	0	0	0		
CFR Satellite Fire Outlet	Cluster 9	OUTLET	0	0	0		
Difference of Inlet-Outlet		INLET-OUTLET	0	0	0		
PSOB Domestic Water				Consumption (KL)			
Details							
PSOB Domestic Water Consumption		INLET	0	0	0		
Total Sub-Consumption to PSOB Domestic Line	Cluster 10	OUTLET	0	0	0		
Difference of Line 10 to Sub-Consumption		INLET-OUTLET	0	0	0		

VK-SOLARP	
Dear Customer, Total Energy generation from the Solar plant today is 11.42 MWh.	
30-7-2021	
Dear Customer, Total Energy generation from the Solar plant today is 16.72 MWh.	
31-7-2021	
Dear Customer, Total Energy generation from the Solar plant today is 16.58 MWh.	
01-8-2021	
Dear Customer, Total Energy generation from the Solar plant today is 11.76 MWh.	
02-8-2021	
Dear Customer, Total Energy generation from the Solar plant today is 11.54 MWh.	
03-8-2021	

CHILLER PLANT DAILY MIS REPORT			
Page 1			

CHILLER MANAGEMENT SYSTEM		
System Enable	True	
System Reset	1 allow	
Stage UP delay	2,700.0	
Stage UP FLA	59.0	
Stage Down delay	1,800.0	
Stage Down FLA	76.8	
Average FLA	87.0 %	
CHW Temp. Setpoint	5.0 deg C	
Outside Air Temp.	7.7	
Outside Air Humidity	7.7	
CWR Temperature	28.8	
CWR Temp. Setpoint	15.0	

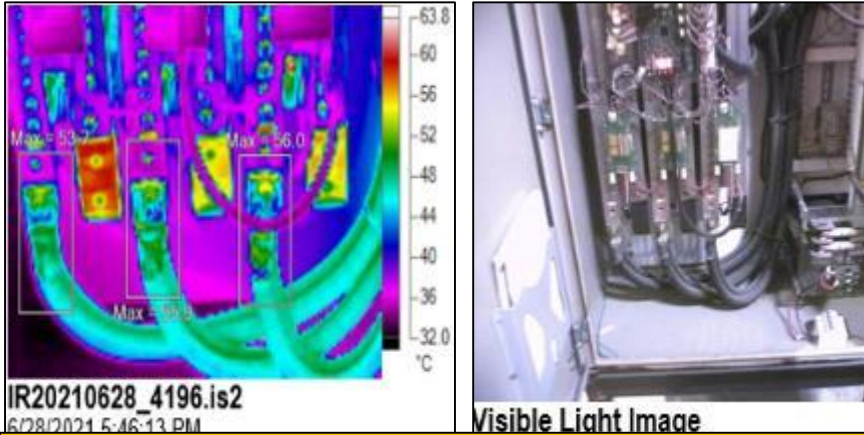
Energy Consumption Report																	
28-Jul-2021																	
Consumption on date	T0F-1	T0F-2	T0F-3	T0F-4	T0F-5	T0F-6	T0F-7	T0F-8	T0F-9	T0F-10	T0F-11	T0F-12	Total	CHMETS Ass'd. Consumed	PTB Chiller Running hours	Max Temp °C	Min °C
Consumption on 19-07-2021	8536	12620	8632	11303	8413	7638	4236	5753	8324	110	2369	4616	77369	20729	48.10:00	28.0	23.0
Consumption on 20-07-2021	7012	12520	8672	10588	8232	6802	3838	5514	8496	110	2315	4732	72182	18221	44.25:00	28.0	23.0
Difference Compare with previous day		(2568)	(1432)	(1088)	(1170)	(1476)	(430)	142	226	(34)	(1417)	(1500)	5517			1	-
Consumption on 20-07-2020	7474	13212	8786	10326	8238	5794	4244	5810	8584	3335	0	1851	78463	24467	49.30:00	33	23
Difference Compare with 2020 year		(5300)	(1060)	(74)	1100	(144)	(180)	(110)	(298)	2941	(1438)	(5240)	5517		5:05:00	17	(1)

Power Generation SMS from Solar Plant

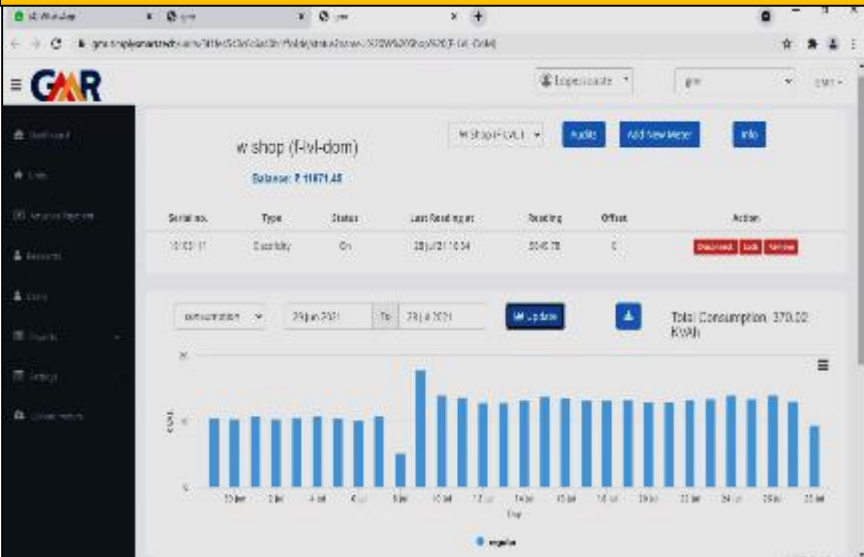
Chiller Plant Daily MIS Report

Chiller Plant Manager

Comparing Power Consumption pattern Earlier Day and Same day last year



**Thermography for Electric Panels (Replicated from AGL maintenance best practices)**



**Prepaid Energy Meter Dashboard**



# Innovative Technologies Implemented



## "In a First-In-Asia, GMR adopts an Inflatable Hangar"

GMR has taken a giant leap in terms of aircraft maintenance, service & overhaul in Asia, adopting a new, innovative technology, "The Inflatable Hangar". The Inflatable Hangar may be used for multiple purposes including scheduled and unscheduled maintenance, engine or landing gear replacement.



## GMR goes Smart with India's First "IoT enabled Trolley management"

**GHIAL** has introduced '**IoT enabled Smart Baggage Trolleys**', becoming India's first airport to track and maintain the availability of baggage trolleys for passengers in the real time across the airport.



## GMR goes eco-Smart with "Bi- Polar Ionization system integrated with HVAC systems"

GMR adopted innovative technology of Bi-polar ionization system for maintaining the indoor air quality, which is installed & integrated with HVAC system.



# Innovative Technologies Implemented



## AMR Water Meter Installation

Installed automatic water meters (AMR) sector wise in various locations. This will help in reconciling total domestic and flushing water usage, same can be monitored online.

The following are the advantages of AMR water meters.

- 1) Real time data acquisition
- 2) Data validation
- 3) Water consumption and history report
- 4) Alarms and events
- 5) Monitoring of zone wise water consumption
- 6) Identification of pipe-line leakages

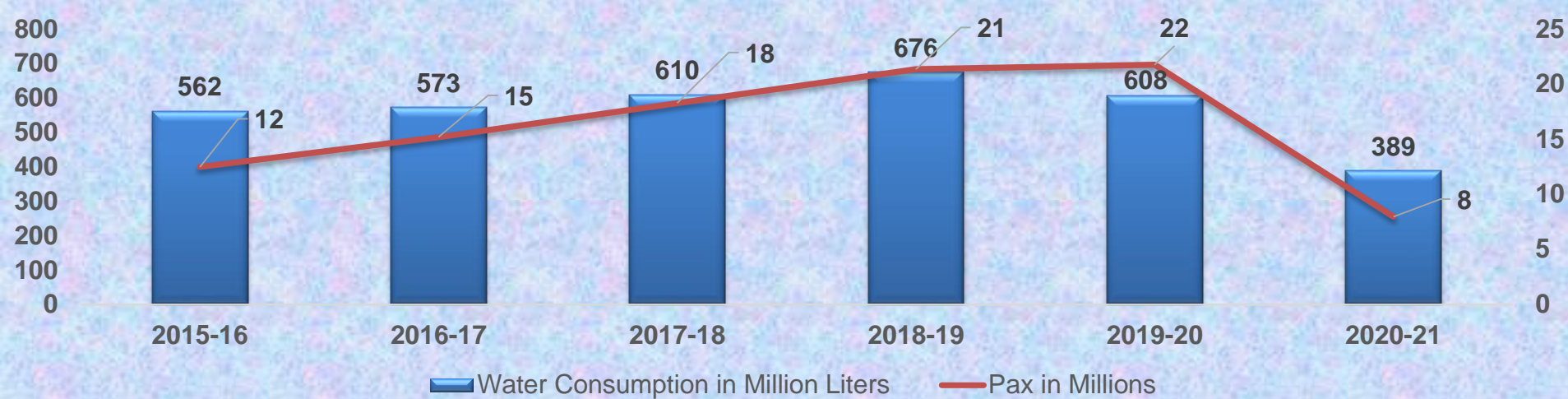


## GMR Hyderabad Air Cargo – Blockchain based real-time tracking of Vaccine Shipments

To roll out a technology solution that can help provide real time tracking and monitoring of vaccine shipments being handled through GHAC.

Solution to give visibility on location, product quality and safety of vaccine shipments to both the vaccine manufacturer and the buyers enrolled on the 'Vaccine Ledger' platform

## Water Consumption



### Key Water Conservation Initiatives:

- **Water Balancing study and Pressure Control**
- **Recharge of Open Wells & Bore wells**
- **Topographical Study of Airport Land to create reservoirs for rainwater usage**
- Cloud based Automatic Irrigation System
- Natural Coagulant – Enhanced STP throughput by 30%
- Water efficient appliances and equipment
- Creating awareness among the Airport Community
- Wastewater reuse and recycling (STP 2\*925KLD+1\*1325KLD)
- Rainwater runoff use
- Push type taps with aerators installed
- Less water consuming plantation in Landscape Area



# Reservoirs @ GHIAL – Achieving Water Neutral Status



Based on entire campus hydrological study, GHIAL has developed 4 storm water reservoirs at strategic locations capable to store 10 Lakh KL water, spread over 127 acres, for domestic use & ground water table recharge.



**Storm Water Treatment Plant**





RGIA is recognized by **CII** and is awarded **Performance Excellence Award** in Ground mounted Solar Category



GMR-led Hyderabad International Airport Limited (GHIAL) clinched the prestigious "**Gold Award**" at the **Telangana State Energy Conservation Awards 2020**



Rajiv Gandhi International Airport (RGIA) in Hyderabad have received the ACI World's (Airports Council International) prestigious "**Voice of Customer**" recognition.

# Awards & Accolades Despite Current Challenges

**GMR Hyderabad International Airport Limited, Hyderabad**

**Mr. Prasanna K. Reddy**  
HOD - Engineering & Technical Services

**Unique Achievements**

- CII's National Energy Leader Award
- Skytrax Best Regional Airport & Best Airport Staff Service
- CIP group award at Business Excellence event
- CII-55 Excellence Award

**21<sup>st</sup> National Energy Award for Excellence in Energy Management 2020**

Confederation of Indian Industry  
125 Years - Since 1895



**GHIAL wins 'ACI - ASQ Best Airport by Size & Region 2020' in 25 Million Pax/Annum (MPPA) category.**

**GHIAL receives 'ACI - Asia-Pacific Green Airports Recognition 2021' in 25 Million Pax/Annum (MPPA) category.**



**Skytrax Best Regional Airport & Best Airport Staff Service 2021**



**CII National Energy Leader Award in 2019 & 2020**



**CIP Group award at Business Excellence event for Promising Innovation**



**CIP Group awards at Business Excellence Event for "Energy Conservation" & "Dare to Try"**



**CII Excellent Energy Efficient Unit – 2014, 2015, 2017 2018, 2019 & 2020**



## Certifications:

- ❑ **EnMS – ISO 50001: 2018**
- ❑ **GHG – ISO 14064: 2006**
- ❑ **QMS – ISO 9001: 2015**
- ❑ **EMS – ISO 14001: 2015**
- ❑ **OHSAS – ISO 450001: 2018**
- ❑ **CRM – ISO 10002: 2014**
- ❑ **ISMS – ISO 27001: 2005**
- ❑ **ITSM – ISO 20001: 2011**
- ❑ **LEED Certification- "Silver Rating"**
- ❑ **Airport Carbon Accreditation – Level 3+ Neutrality**
- ❑ **British Safety Council**

## Hyderabad International Airport wins prestigious CII award for solar energy

### RGIA wins CII-Green Power Performance Excellence Award

The award comes as a recognition for the excellent initiatives taken by GHIAL in generating the solar energy in its 5.5 MW solar plant

**RGIA Wins CII-Green Power Performance Excellence Award**  
 The award comes as a recognition for the excellent initiatives taken by GHIAL in generating the solar energy in its 5.5 MW solar plant. The award is presented by the Renewable Energy Council of India (RECI) in recognition of the airport's commitment to sustainable energy and green power.



Senior GHIAL officials receiving the award from the Renewable Energy Council of India (RECI) for the airport's solar energy initiatives.

## Hyderabad airport bags TSECA award for excellent initiatives

The Rajy Gandhi International Airport (RGIA) has bagged the prestigious gold award in Telangana State Energy Conservation Awards-2020 (TSECA). The award was presented for the excellent initiatives taken by GMR Hyderabad International Airport Limited (GHIAL) in energy conservation. Senior GHIAL officials received the award presented by D. Prabhakar Reddy, CMD, Telangana Pradesh and Genco and Sandeep Kumar Subbarao, Secretary, Prandiyat Raj and Rural Development (PR & RD) on the last day of Energy Conservation Week Celebrations on Sunday at the Dr MCRHRD Institute. The Telangana State Renewable Energy Development Corporation Limited (TSREDCO) annual forum recognized the companies that engaged in energy efficiency initiatives by adopting best practices and technological advancement in their daily operations. Over the last three years, GHIAL energy conservation initiatives led to substantial energy savings besides a rapid dip in greenhouse gas emissions at the airport. It is worth noting that RGIA is also a carbon neutral airport having level 3 + 'Neutrality' accreditation from Airports Council International (ACI) under its Airport Carbon Accreditation (ACA) programme.



The Hyderabad International Airport (GHIAL) has bagged the prestigious gold award in Telangana State Energy Conservation Awards-2020 (TSECA).

## Rangareddy : RGIA wins CII-Green Power Performance Excellence Award

The award is presented for the excellent initiatives taken by GHIAL in generating the solar energy in its 5.5 MW solar plant.

## Hyd airport wins gold award at TSECA-2020

Andhra Pradesh awarded for excellent initiatives taken in GHIA Energy conservation

GHIAL has bagged the gold award in the TSECA-2020 award for its excellent initiatives in energy conservation. The award is presented by the Telangana State Energy Conservation Awards-2020 (TSECA) committee. The award is presented to GHIAL for its 5.5 MW solar plant. The award is presented to GHIAL for its 5.5 MW solar plant. The award is presented to GHIAL for its 5.5 MW solar plant.



Senior GHIAL officials receiving the award from the Telangana State Energy Conservation Awards-2020 (TSECA) committee.

16-Dec-20 | Telangana

## శంషాబాద్ ఎయిర్పోర్టుకు ప్రతిష్ఠాత్మక అవార్డు



శంషాబాద్ ఎయిర్పోర్టుకు ప్రతిష్ఠాత్మక అవార్డు. The award is presented to GHIAL for its 5.5 MW solar plant. The award is presented to GHIAL for its 5.5 MW solar plant. The award is presented to GHIAL for its 5.5 MW solar plant.

## శంషాబాద్ కు మరో అవార్డు



The award is presented to GHIAL for its 5.5 MW solar plant. The award is presented to GHIAL for its 5.5 MW solar plant. The award is presented to GHIAL for its 5.5 MW solar plant.

# RGIA WINS AWARD FOR RENEWABLE ENERGY INITIATIVES

## Airport facilitates touch-less elevator



The touch-less elevator at the airport terminal is a testament to the airport's commitment to modern infrastructure and passenger convenience.

## శంషాబాద్ కు మరో అవార్డు



The award is presented to GHIAL for its 5.5 MW solar plant. The award is presented to GHIAL for its 5.5 MW solar plant. The award is presented to GHIAL for its 5.5 MW solar plant.

## శంషాబాద్ ఎయిర్పోర్టుకు గోల్డెన్ అవార్డు

శంషాబాద్, తెలంగాణ: ఊపిరితీగడంపై శంషాబాద్ ఎయిర్పోర్టుకు గోల్డెన్ అవార్డు. The award is presented to GHIAL for its 5.5 MW solar plant. The award is presented to GHIAL for its 5.5 MW solar plant. The award is presented to GHIAL for its 5.5 MW solar plant.



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## Hyderabad airport bags CII-Green Power award

The award was virtually presented during an event organised by the Renewable Energy (RE) Council of Confederation of Indian Industry (CII) - Godrej Green Business Centre (GBC). The award is presented to GHIAL for its 5.5 MW solar plant. The award is presented to GHIAL for its 5.5 MW solar plant. The award is presented to GHIAL for its 5.5 MW solar plant.

# Hyderabad international airport gets energy efficiency awards

DECCAN CHRONICLE. | TSS SIDDHARTH

# TEAM GHIAL

