CII 25th National Award for Excellence in Energy Management 2024

Kodathi, Bengaluru

WIPRO TODAY

A trusted, global partner.

Wipro Limited (NYSE: WIT, BSE: 507685, NSE: WIPRO) is a leading technology services and consulting firm focused on building innovative solutions that address clients' most complex digital transformation needs.

Leveraging our holistic portfolio of capabilities in consulting, design, engineering, and operations, we help clients realize their boldest ambitions and build future-ready, sustainable businesses. With over 250,000 employees and business partners across 66 countries, we deliver on the promise of helping our customers, colleagues, and communities, to thrive in an ever-changing world.

FY23 IT services revenue

$11.2 Bn

Employees

256,921

Active global clients

1,441

Global presence

65 countries

148 diverse nationalities

Figures based on the Financial Year ended March 31, 2023.

We believe business fuels our purpose, and purpose fuels our business.

Member of

Dow Jones Sustainability Indices

Powered by the S&P Global CSA

Wipro is a proud member of the Dow Jones Sustainability Index (DJSI) – World for the 13th year in a row.

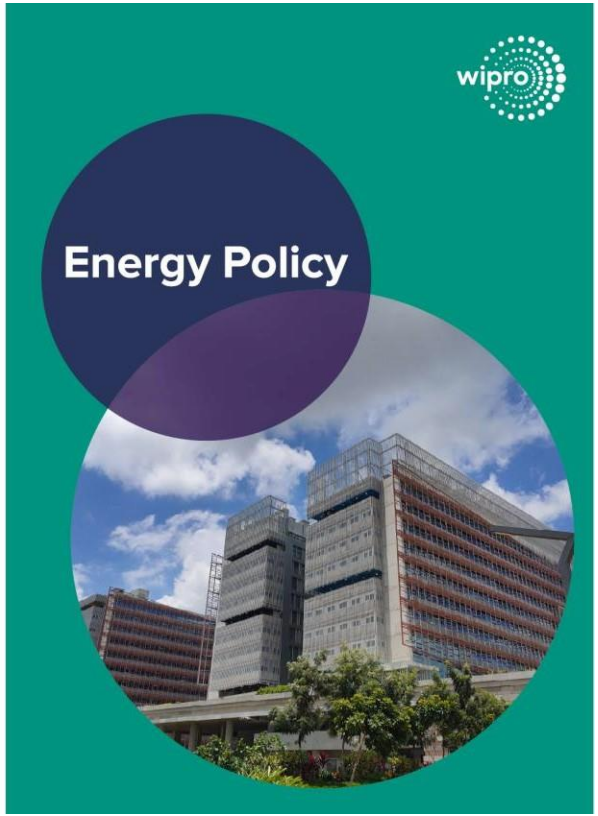
Wipro is the only company in the IT Services industry with an unbroken track record since 2010, reflecting our long-term commitment to sustainability.

Wipro is also a member of the DJSI Emerging Markets Index.

Kodathi Campus overview

- Established in 2018
- Campus Area - 48.25 Acres
- Built up area – 3.48 Million Sq.ft and Seating Capacity > 19,255
- 5 Towers (S4,S1,S3,S5,S2)
- 8 Numbers of 2000 kVA DGs for Raw power backup
- 4 Numbers of 1.8 MW DRUPS System with 4 Numbers of 2000 kVA DGs for Critical power back up

Energy Policy



Wipro is committed to optimize its energy footprint to support a sustainable world. We proudly integrate this commitment into our company culture and corporate values.

Wipro continuously improves its energy performance through a strategic action plan that is regularly reviewed and updated annually. We have defined Energy Performance Indicators and set targets for ourselves in accordance with ISO 50001.

This policy sets the framework for managing our energy consumption and driving various initiatives to support the following goals:

- Reduce CO2 emissions
- Increase our use of renewable energy
- Increase our overall energy efficiency
- Invest in clean, energy-efficient technology

In pursuit of these goals, Wipro is committed to:

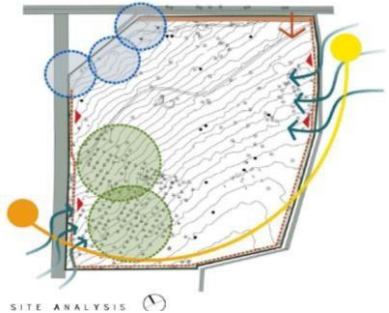
- Responsible energy consumption and improving energy efficiency throughout all our sites
- Net Zero goals by 2040, with a reduction in absolute emissions of 55 percent by 2030 keeping 2017 as the base line
- Investing in new technology that supports renewable energy sources
- Considering life cycle energy costs for future business investments
- Purchasing energy-efficient services for our facilities and equipment needs
- Being legally compliant with applicable regulations and requirements
- Designing our facilities for optimum energy performance

We are addressing energy efficiency in all areas of our business including management, procurement, financial, technical, and more.

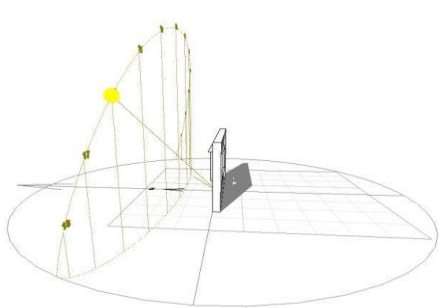
We will ensure that the relevant information and resources are available to achieve our objectives and targets. This policy and our energy performance will be updated as new information becomes available.

Global Head - Operations
Dinesh Wadehra
July 2022

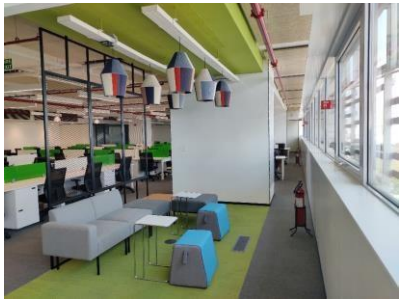
Kodathi Campus key highlights



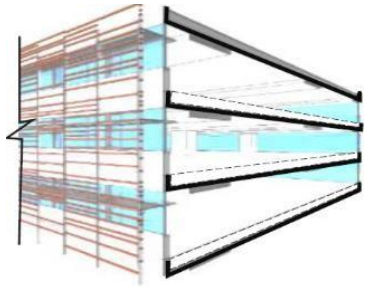
Building design based on Sun path



Double skinned Façade design to reduce heat ingress



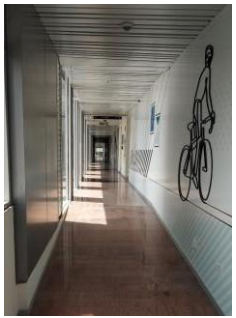
95% Day lit workspaces with day light and movement sensors

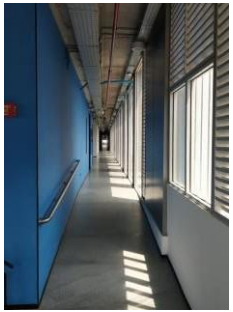


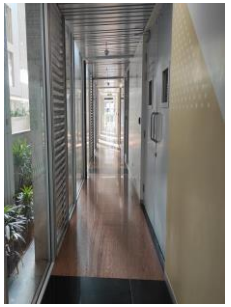
Largest Underfloor Air Distribution System (UFAD) - 2.5 Mn ft^2

Kodathi Campus key highlights

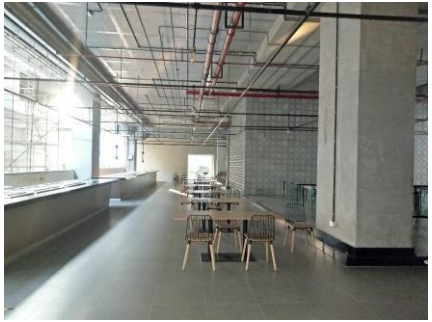
100% LED for Indoor and Outdoor Lighting



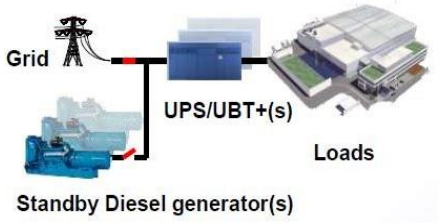




Naturally ventilated corridors in all floors

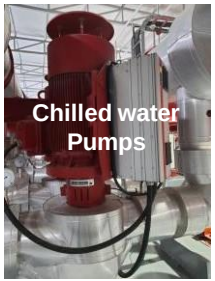


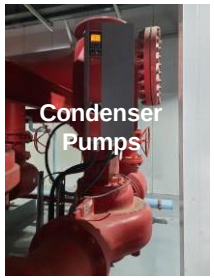
50% Cafeteria space is naturally ventilated

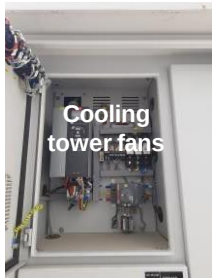


India's first Medium voltage Isolated parallel bus DRUPS system

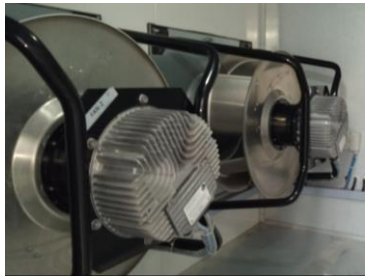
Kodathi Campus key highlights



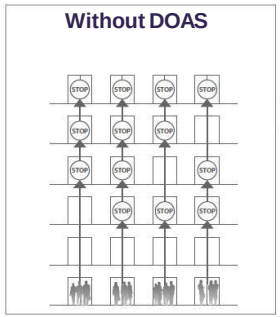


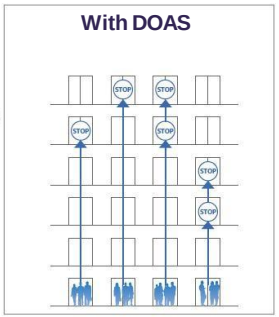


VFD for pumps & fans applications



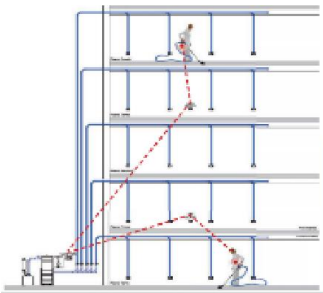
EC fans for AHUs, UFADs, Exhausts, DOAs





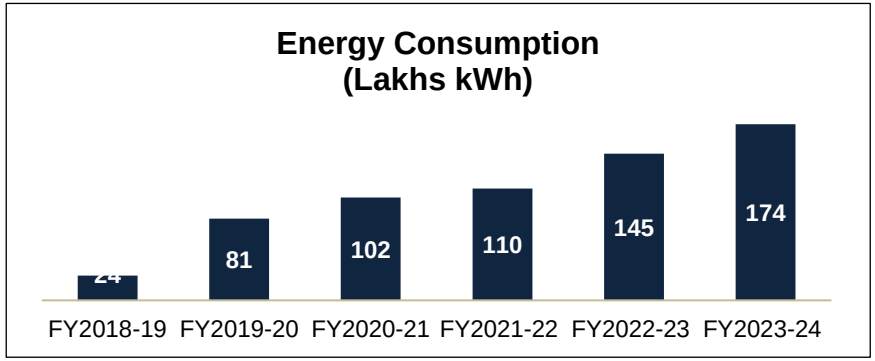
According to each car's location and passenger load, the group control system assigns a call to the elevator that best balances operational efficiency and energy consumption

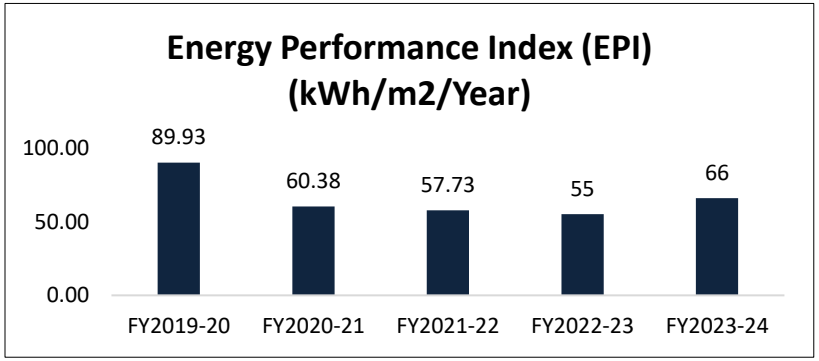
Destination Oriented Allocation System (DOAS) in Lift operation



Centralized Vacuum System

Energy consumption overview





Year	EB (kWh)	DG (kWh)	Wheeling Energy (kWh)	Total (kWh)	Area (m^2)	EPI (kWh/m^2/Year)	Remarks
FY2019-20	3,374,400	438,766	4,250,000	8,063,166	89,664	**89.93**	
FY2020-21	747,600	528,330	8,890,000	10,165,930	168,365	**60.38**	
FY2021-22	2,618,400	491,618	7,993,581	11,103,599	191,219	**58.07**	
FY2022-23	3,230,500	521,320	10819879	14,571,699	264,700	**55.05**	
FY2023-24	933,050	407,390	16,134,550	17,474,990	264,700	**66.01**	Occupancy increased by 2.3X

National and global benchmarking

Benchmarking Details	Reference	SEC (kWh/m²/Year)	Wipro Kodathi Campus
Other Wipro Campuses	Wipro Annual Report FY2022-23	181	**90 (FY2019-20)**
Other IT/ITES companies/Group	CII Energy award Programme, Bangalore (2021-22)	70	**60 (FY2020-21)**
National Level	BEE (Bureau of Energy Efficiency)	179	**58 (FY2021-22)**
International Level	Lawrence Berkeley National Laboratory	65 to 90	**55 (FY2022-23)** **66 (FY2023-24)** **We have achieved 17% energy savings after normalizing against the increase in the head count.**

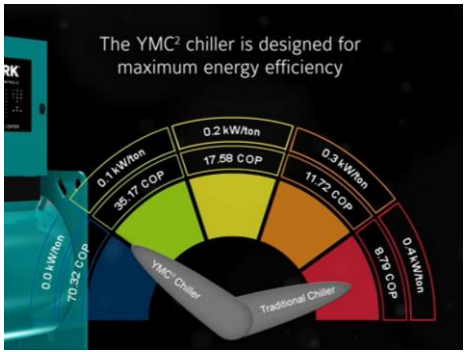
Encon Projects planned in FY2024-25

- Optimizing Data Center Energy Efficiency by improving the PUE

High efficiency water-cooled magnetic bearing centrifugal chillers

Sustainability

- YMC² chiller first reduces the chances for refrigerant leaks by dramatically reducing the number of connections, down 57% compared to traditional chiller.
- YMC² chiller employs falling-film evaporator technology that reduces the overall refrigerant charge by up to 30% and improves the efficiency of the evaporator.
- The YMC² chiller uses R-134a and is future compatible with R-513A, a low GWP and nonflammable refrigerant.
- YMC² chiller utilizes a hermetically sealed, permanent-magnet motor. The compressor is directly driven by the motor, eliminating any losses from using gears for power transmission. Active magnetic bearings are used to support the motor shaft allowing this chiller series to be completely OIL FREE, with no oil management system required.
- YMC² chillers are equipped with the YORK® OptiSound™ Control a patented combination of centrifugal-chiller hardware and software that reduces operational **sound levels (as low as 73dBA** at AHRI Full load standard conditions)
- YMC² chiller is driven by a Variable Speed Drive (VSD) to ensure optimal real-world performance especially at part load conditions.



Project-1 Optimization of AC unit to communication room at S4 Tower 4F

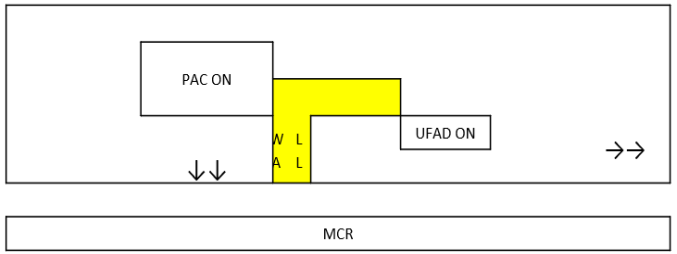
Problem Statement

- S4 4F UFAD room consist of 1 No PAC feeding to communication room & 1 no's UFAD feeding to Workstation.
- Both units (1 UFAD 7 TR & 1 PAC 7.5 TR) are running simultaneously
- Power consumption recorded was 60480 Kwh/annum

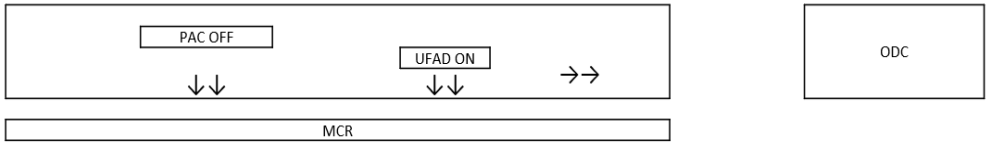
Solution Implemented

- Below raised floor removed the bund wall between communication room and ODC units
- Optimized the operations by running only 1 No's UFAD for 10Hrs/day from 8am to 6PM
- Remaining 14Hrs only PAC is operated
- Total Kwh Savings realized is 25,200 / annum

➢ **Before Implementation**



➢ **After Implementation**



Annual Savings Achieved
25,200 Kwh

Project-2 Optimizing Data Center air flow distribution

Problem Statement

- The present data center PAC unit 4nos X 25TR were running continuously
- Proper supply air distribution was not happening
- Even though we have cold aisle, observed that low temp in hot aisle areas
- The present power consumption was 342144 Kwh/annum

No Racks present

Supply Air grills closed

Solution Implemented & Benefit achieved

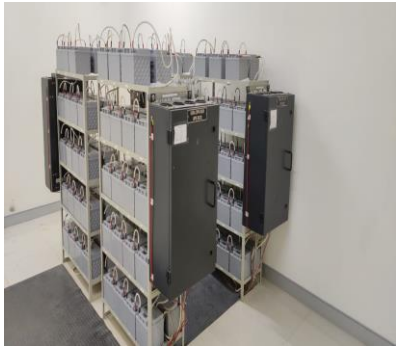
- We have closed supply air grilles, where no servers are installed
- By running PAC units 3X25TR = 256608 Kwh/annum
- Improved the data center operating temp

Annual Savings Achieved
85,536Kwh

Project-3 Optimizing Fast track building UPS 60 KVA into DeRUPS supply

Problem Statement

- Initially the Fast track Building UPS power was fed from 2X60KVA UPS.
- Continuous operation of 2X2TR AC units to maintain temperature in the UPS and battery rooms.
- Energy consumption of 117504 Kwh/Annum while operating 2X 2TR AC units

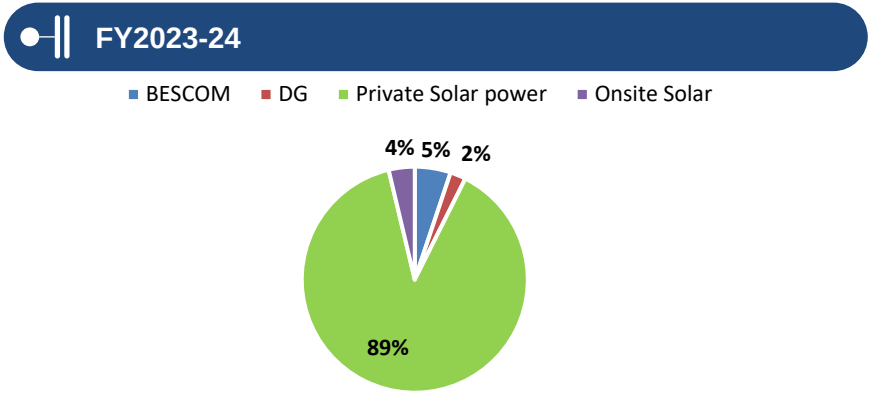


Solution Implemented & Benefit achieved

- Integrated the FTB Building UPS loads with Centralized DRUPS system
- Avoided AC operations for UPS and Battery rooms
- Procurement and Usage of 76 no of batteries eliminated and hence battery disposal
- Energy conservation do the tune of 117504 Kwh/annum

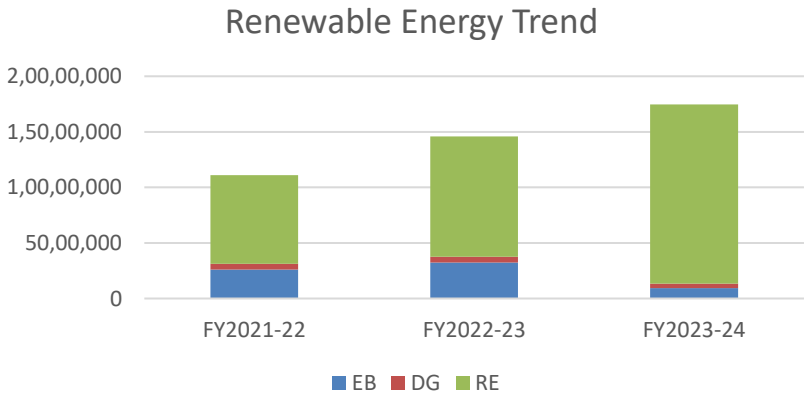
Annual Savings Achieved
1,17,504 Kwh

Utilization of Renewable Energy sources



- We entered into power purchasing agreement with two RE Developers and started procuring Solar Power from June 2022 onwards for Kodathi campus.
- We have installed 462 kW_p onsite Solar PV Plants at Utility block, S1 and S3 tower roof areas recently.
- Last 3 years the renewable energy utilization increased 89%

Roof Location	Plant Capacity	Investment (₹ Million)	Date of commissioning
Utility Block	65.52 kW_p	2.675	April 2021
S3 Tower	162.24 kW_p	6.156	July 2021
S1 Tower	234 kW_p	7.996	August 2021
Total	**462 kW_p**	16.8	



On Site Solar

Year	Source (Solar, wind, etc.,)	Installed capacity (in MW)	Generation (in Million kWh)	Consumption from On-site RE (in Million kWh)	Share % w.r.t to overall energy consumption
FY 2021-22	Solar	0.462	0.670	0.670	4.04
FY 2022-23	Solar	0.462	0.674	0.674	4.99
FY 2023-24	Solar	0.462	0.675	0.675	4.0

Off Site Solar

Year	Source (Solar, wind, etc.,)	Installed capacity (in MW)	Generation (in Million kWh)	Consumption from On-site RE (in Million kWh)	Share % w.r.t to overall energy consumption
FY 2021-22	Solar	30 MW (Group)	7.58	7.58	74.2
FY 2022-23	Solar	30 MW (Group)	10.193	10.193	75.9
FY 2023-24	Solar	30 MW (Group)	16.13	16.13	89.0

GHG Emissions

Table 1.1.1

Emissions - Scope 1	FY 2021-22	FY 2022-23	FY 2023-24
Fuel & Refrigerant – India offices	9,571	9,640	6,515
Emissions - Scope 2			
Purchased electricity – India offices	72,973	59,120	32,413
Emissions - Scope 3			
Employee commute	16,969	28,193	26,147
Business travel	20,456	57,934	36,227
Waste	153	101	76
Upstream Fuel + Energy	71,650	67,017	53,843
Purchased goods/services	88,104	87,287	33,968
Upstream leased assets	10,381	7,293	2,462
Downstream leased assets	0	0	1,234
Work from home emissions	36,639	23,968	18,230

For further details, Please refer Wipro Annual Report

https://www.wipro.com/content/dam/nexus/en/investor/annual-reports/2023-2024/integrated-annual-report-2023-24.pdf

https://www.wipro.com/content/dam/nexus/en/investor/annual-reports/2023-2024/wipro-esg-dashboard-fy23-24.pdf

Wipro is a founding member of 'Transform to Net Zero': A global alliance to accelerate the transition to a net-zero global economy. **Our Net Zero Commitment**: ***We're committed to contribute to planetary Net-Zero Greenhouse Gas emissions targets by reducing our emissions to zero by 2040 and Near Term Target of 59% reduction (Scope 1&2) by 2030 & 100% RE by 2030.***

Read more at **wipro.com/sustainability**

Online Indoor Air Quality(IAQ) monitoring at workplace

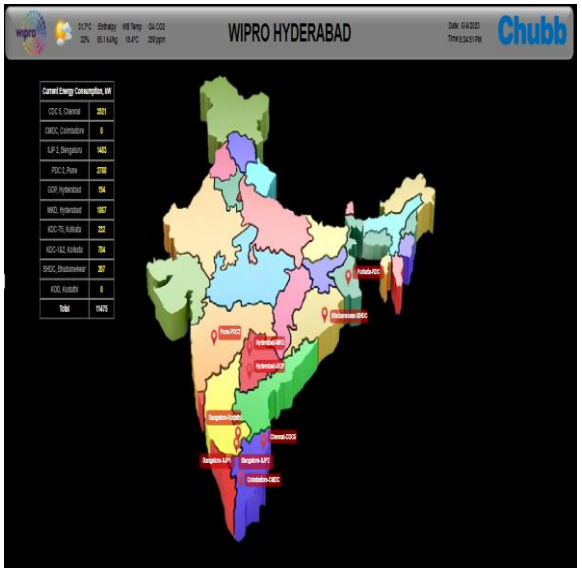
Air handling units provided for DOAs are Eurovent certified units with 2 stage filtration system with UV lamps and refrigerant heat pipes. Fresh air VAV's provided in the DOA unit distribution ensures supply of fresh air based on space CO_2 demand. All the fans in DOA units are of EC fans for better energy efficiency.

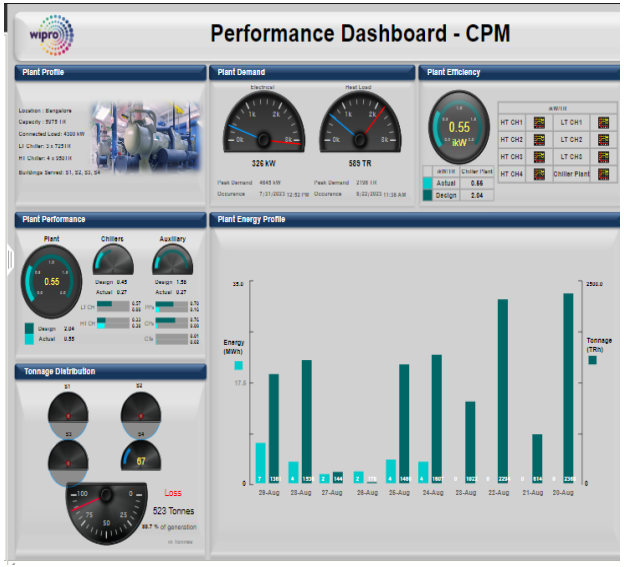
We have installed IAQ sensors at work places which monitors Temperature, RH, CO_2, $PM_{2.5}$ and TVOC parameters on continuous basis. IAQ sensor is tested and certified by the RESET standard for accuracy, and fully compliant with the WELL v2 building standard for performance.

We have used best practices of ISHRAE and IGBC and incorporated continuous monitoring of RH,CO_2, $PM_{2.5}$ and TVOC through IAQ sensor and other parameters are measured through external agency in all ODCs at regular interval.

Building Management System

- We have Robust Building Management System with Web Control 6.5 Devolved by ALC integrated with the help of Chubb system
- Centralized Command Center also Established to Monitor the Pan India facilities.
- Various insights on the buildings are monitored like EPI, Comfort Index, Chiller Performance, Weather Station, Energy Profiles, etc.

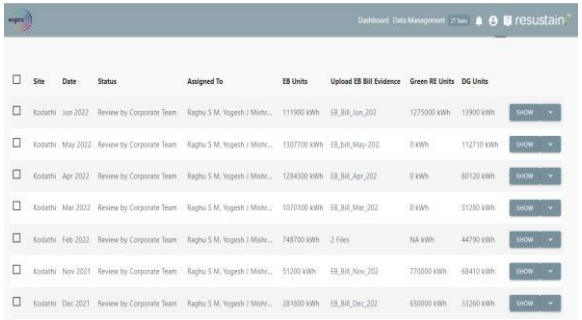


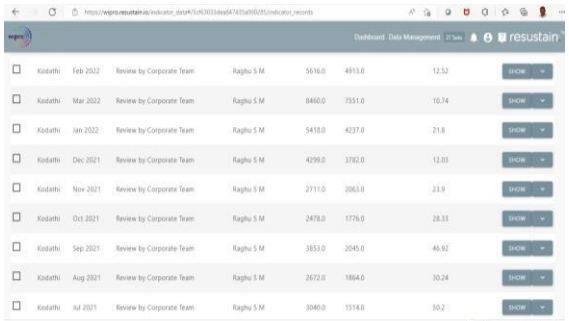


Teamwork, Employee involvement and Monitoring

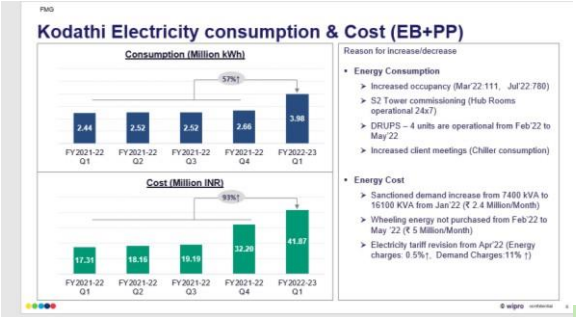
BMS System to monitor energy consumption

Internal Portal to update energy, water and waste data

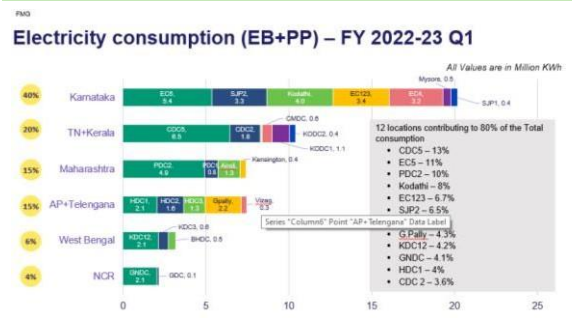




Quarterly review of energy performance



Energy Performance is reviewed on monthly basis by FMG Head – PAN INDIA



ISO 50001 - EnMS

DNV

MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: CS59026 | Initial certification date: 10 August 2022 | Valid: 10 August 2022 – 09 August 2025

This is to certify that the management system of

Wipro Limited

SJP2- SEZ BLR Special Economic Zone (SR) Sy. No. 69(P), 71/4(P), 78/8A(P), 134(P), 76(P), 77, 135(P), 79/1A,70,71(P), Doddakannelli Village, Varthur Hobli, Sarjapur Road, Bangalore - 560035, Karnataka, India

and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Energy Management System standard:

ISO 50001:2018

This certificate is valid for the following scope:

Delivery of software solutions, software application services, customer support with ITES management, mechanical and electronic testing services, and support of IT infrastructure services.

Place and date: Barendrecht, 10 August 2022

For the issuing office: DNV - Business Assurance, Zwolseweg 1, 2994 LB Barendrecht, Netherlands

Erle Kaak, Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

ACCREDITED UNIT: DNV Business Assurance B.V., Zwolseweg 1, 2994 LB, Barendrecht, Netherlands - TEL: +31(0)102922689. www.dnv.com/assurance

Wipro Kodathi Campus is Certified for ISO 50001:2018 from FY 2023-24 Onwards & recently We had Successfully completed the PA2.

IGBC Certification

Kodathi campus achieved "Platinum" rating under IGBC Green New Building Rating system

IGBC

CII
Confederation of Indian Industry

Indian Green Building Council (IGBC)

hereby certifies that

Kodathi IT/ITES SEZ Campus – Blocks S1 to S5
Wipro Limited, Kodathi, Bengaluru

(IGBC Registration No. NBO 18 0246)

has successfully achieved the Green Building Standards required for the following level of certification under the

IGBC Green New Buildings Rating System

(Owner-Occupied Building)

Platinum

17 March 2023

(This certification is valid for next 3 years)

C N Raghavendran
Chair, IGBC Green New Buildings

Gurmit Singh Arora
Chairman, IGBC

K S Venkatagiri
Executive Director, CII-Godrej GBC

Awards in 2020 - 2024

CII – Green Building Congress

Kodathi campus awarded in CII – Green Building Congress 2018 India's Annual Flagship Event on Green Buildings

CII - Excellent Energy Efficient Unit

Kodathi campus awarded as "Excellent Energy Efficient Unit" in Buildings sector during CII National Award for Excellence in Energy Management 2021

CII - Excellent Energy Efficient Unit

Kodathi campus awarded as "Excellent Energy Efficient Unit" in Buildings sector during CII National Award for Excellence in Energy Management 2022

Golden Peacock - Energy efficiency

Kodathi campus won "Golden Peacock Award for Energy Efficiency" for the year 2021 in IT Sector

Environment Excellence award

Kodathi campus awarded "Winner" for Services Sector in Environment Excellence Awards 2022

Awards in 2020 - 2024

Operational Excellent Award

Kodathi campus awarded three awards Q1 Bronze, Q3 Bronze & Q4 Gold for "Operational Excellent Award" 2021 - 2022

Office Innovation award

Kodathi campus won two awards for "Digital checklist" and "IAQ monitoring" in CII National Office Innovation Competition 2022

Operational Excellent Award

Kodathi campus awarded 2nd Runner up Award Q3 "Operational Excellent Award" 2021 - 2022

CII-SR EHS Excellence Award

Kodathi campus awarded "5 Star Rating" for Excellence in EHS Practices in the CII-SR EHS Excellence Award for the year 2020

Certifications

ISO Certification | **IGBC Certification**

Standard	Details of Management System	Validity
ISO 14001:2015	Environmental Management System	07 Feb' 24 – 06 Feb' 27
ISO 45001:2018	Occupational Health and Safety Management System	07 Feb' 24 – 06 Feb' 27
IGBC	India Green Building council	17 Mar' 23 – 17 Mar' 26
ISO50001:2018	Energy Management System	01st Aug 22 – 01st Aug' 25

Net Zero Action Plan

Wipro’s commitment to Net Zero:

Wipro is one of the first 7 companies globally to have Net Zero goals validated against the Net Zero standard from SBTI (Science Based Targets Initiative). Our focus is on direct decarbonization approaches.

Near-Term Targets

Wipro commits to reduce absolute scope 1 and 2 GHG emissions 59% by FY2030 from a FY2017 base year, * and absolute scope 3 GHG emissions 55% by FY2030 from a FY2020 base year. We are also committed to reach 100% RE by 2030.

Action Plan

Our newer buildings in Bengaluru and Hyderabad are benchmarked against the global best – These new buildings also avoid use Internal to Wipro of UPS batteries and eliminates the environmental impact pertaining to battery manufacturing and disposal.

For existing campuses, measures include new retrofit technologies to improve Chiller and Air Handling Units (AHUs), UPS optimization, integrated design, and monitoring platforms.

The Global Energy command center aggregates Building Management System (BMS) inputs on a common platform to optimize operational control and improve energy efficiency. Around 15 million square feet across India are connected to the BMS. The operations platform comes with ability to address every element of the system at the equipment level and provides advanced algorithms for analytics to monitor performance. Any deviation is tracked and rectified with in-house / OEM support. We have started a program for adoption of ISO50001 Energy management system across our campuses.

Thank You