

Presentation - Olympia Technology Park

OLYMPIA



By
N.SENTHIL KUMAR
AGM

1. About Olympia Group



Background:

The **Olympia Group** was born out of the alliance of Two strong business houses –
The **Khivraj Group** & **The MK Group**.

The Chennai-based renowned **Khivraj Group**, has over 5 decades of successful business history spanning various industries such as Real Estate, Automobile, Retail and Wind Power Generation Led by Mr. Ajit Kumar Chordia & Mr Bharat Kumar Chordia.

Mr Ajit Kumar Chordia, the Managing Director is also an Founding member of IGBC and actively involved in IGBC.

The MK Group Kolkata have an impressive track record of large-scale property development in several sectors of Real Estate - MSB Residential Apartments, Clubhouses and Shopping Malls among others represented by Mr Chandrakant Kankaria.



Mr. Ajit Kumar
Chordia



Mr. Chandrakant
Kankaria



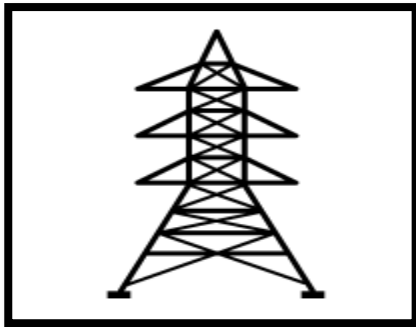
Mr. Bharat
Kumar Chordia



2. OTP Energy Consumption Overview

Energy Sources of Olympia Technology Park

TNEB GRID



WIND ENERGY



OLYMPIA
ENERGY
SOURCES



DG – CAPTIVE



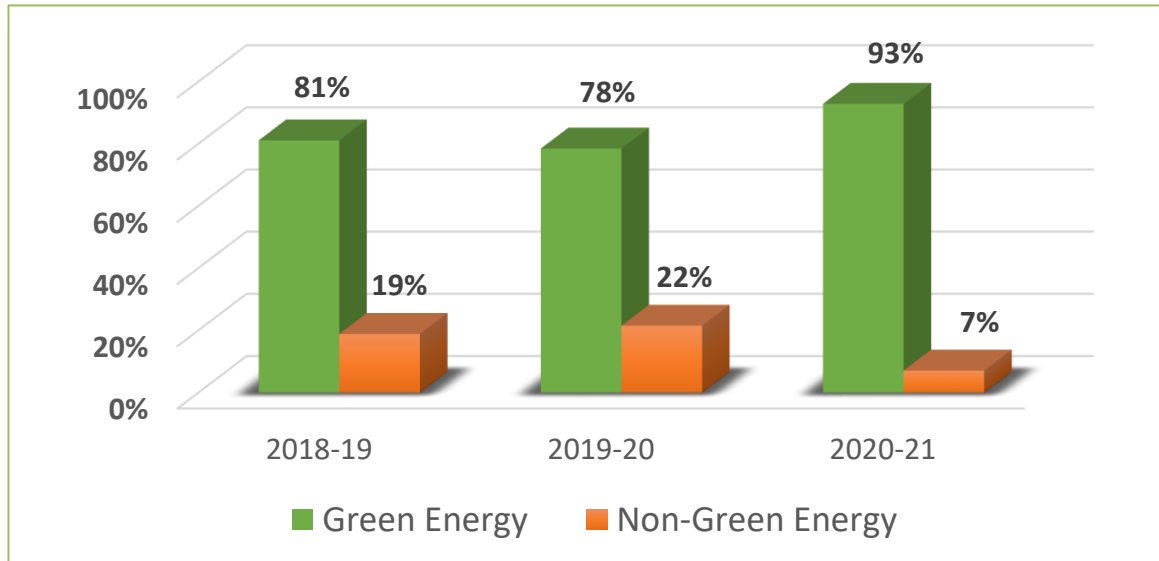
ROOF TOP SOLAR



Energy Consumption Details for Past 3 Years

Source of Energy	Units in KWh		
	2018-19	2019-20	2020-21
TNEB	3725848	5612421	1090435
Diesel Generators	1904570	705110	284610
Solar Energy	1582834	1628935	1475860
Wind Energy	22639484	21433293	16454976
Total	29852736	29379759	19305881

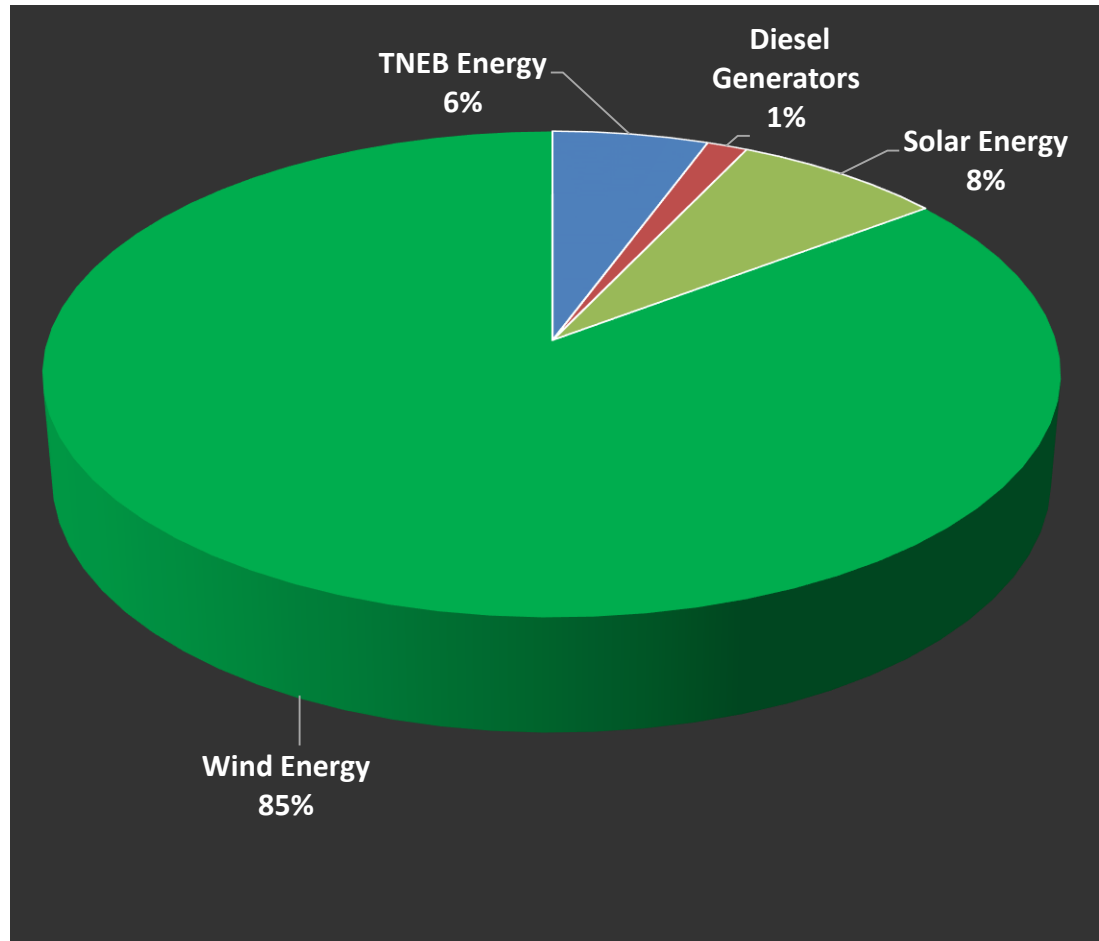
Description	Units in KWh		
	2018-19	2019-20	2020-21
Green Energy	24222318	23062228	17930836
Non-Green Energy	5630418	6317531	1375045
Total	29852736	29379759	19305881



*** Reduction of Energy Consumption FY 2020-21 in the view of Pandemic.**



Energy Consumption FY 2020-21

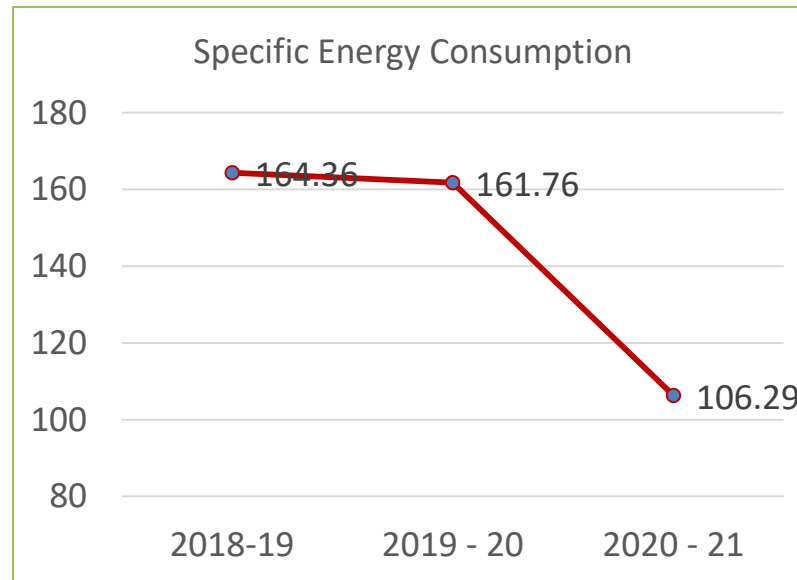


Description of Energy Source	Energy Consumption (in KWh)
TNEB	1090435
Diesel Generators	284610
Solar Energy	1475860
Wind Energy	16454976
Total	19305881



3. OTP Specific Energy Consumption

Parameters	Units	2018-19	2019 - 20	2020 - 21
Total Annual Energy Consumption	KWh	29852736	29379759	19305881
Built Up Area	Sq. M	181631	181631	181631
Specific Electrical Energy Consumption	KWh / Sq.M	164.36	161.76	106.29



Year on Year Improvement of Specific Energy Consumption

Description	2018-19	2019-20	2020-21
Specific Energy Consumption	164.36	161.76	106.29
Variation	7.22	2.60	55.46
Improvement %	4.39 %	1.61 %	52.18 %

Reasons for Improvement in SEC :

- Clients were operated their function through work from home during COVID -19 lock down.
- Conversion of LED lightings in Office Area at Citius – A 7th floor and Altius B & C – 7th floor.



4. Information on Competitors, National & Global Benchmark

SEC Benchmark - Competitor:

Sl.No	Competitor Name	SEC
1	Tata Consultancy Services, Cochin	81.2



Adobe Acrobat Document



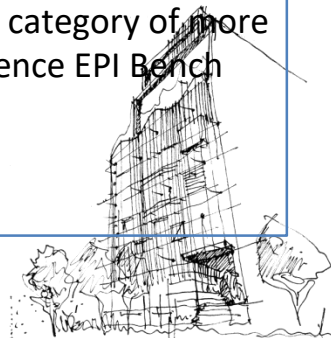
EPI Bench Mark

National SEC Bench Mark (BEE):

EPI Bench Mark for Office Buildings

Climate Zone	Less than 50% AC	More than 50% AC
Warm & Humid	101	182
Composite	85	179
Hot & Dry	90	173
Moderate	94	179

- Office Building EPI depends upon multiple factors like climate zone, operating hours, occupancy trends etc..
- Olympia Tech Park Campus comes under mixed category. Combination of Office, Data labs, Food court & Amenities, Banks, ATM and GYM etc. with 95% Air conditioned space.
- Chennai comes under Warm & Humid Climate Zone and our campus comes under the category of more than 50 % Airconditioned area. Hence EPI Bench Mark as BEE - **182**.
- Our EPI FY 2020-21 - **106.29**



Road Map for Further Improvement of SEC

- Increase the usage of renewable energy from **93 %** to **100 %**
- Consistent Improvement of EPI on year on year.
- Enhancement of onsite solar energy from **1.1 MW** to **1.2 MW**.
- Achieve a Net Zero Energy Rating from IGBC.
- Implementation of ISO 50001 .

Major Encon Project Planned FY 2021-22

- Installation of Auto Tube Cleaning Technology for 3 Nos of 750 TR Water Cooled Chillers to improve the chiller Efficiency and save the energy.

Project Cost – INR **2.56** Millions.

- Conversion of Existing PL Light Fittings into LED Light Fitting in 2nd,3rd,4th & 5th Floor Office Area at Fortius Block

Project Cost – INR **5.37** Millions.



5. Energy Savings Projects Implemented in last 3 Years

Important Projects in 2018- 19, 2019-20 & 2020-21

- Conversion of PL light fittings into LED light fitting in various locations of Office Premises.
- Conversion of existing PL light fittings into advance LED lighting system in ground floor lift lobbies with motion sensor control.
- Conversion of DX AC Units into Chilled water operated CSU units in lobby area .

Year	No of Energy Saving Projects	Investments (in Million INR)	Energy Saving (in MWh)	Cost Savings (in Million INR)
2018 -19	4	9.48	434.61	3.91
2019 -20	2	1.42	83.32	0.75
2020 -21	3	1.63	135.49	1.22



Encon Project Implemented in 2020-21

Conversion of PL Light Fitting to LED Lighting in 7th Floor at Citius A , Altius B & C Block



Before



After



Before

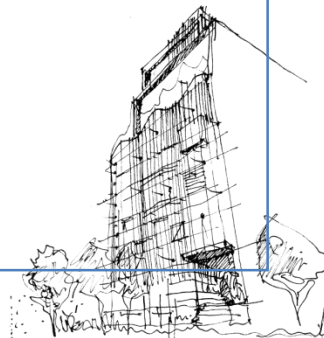


After

- Converted 550 Nos of 56 Watts PL Lamp Fittings into 24 Watts LED Light Fitting in office area.
- Converted 200 Nos of PL Lamp Fittings into 12 Watts LED Light Fitting in passage area and rest room.
- Energy Saved - **65520 Units / Year**
- Cost Saving Achieved – **INR 5.24 Lakhs / Year**
- Investment Cost – **INR 12.93 Lakhs**
- Payback Period - **29 Months**



Energy & Cost
Savings Details for LED C



6. Innovative Projects Implemented

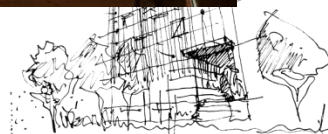
IOT Based Control Command Center

Source of Idea	Solution	Advantages
<ul style="list-style-type: none">▪ Finding difficult to use IBMS Control, Chiller Control, CCTV , FA & PA Systems effectively since the existing systems were installed in standalone at various locations with different integration controls.▪ Also facing the challenges to take the energy meter readings of all occupants manually on daily basis	<ul style="list-style-type: none">▪ Worked out the option to implement the control command center in lift lobby area by using single operating system (Siemens Desigio CC) to control / monitor the operation of IBMS, Chiller , CCTV, FA & PA Systems in one location including integration of all Energy Meters.▪ Implementation Cost – INR 1.50 Crores	<ul style="list-style-type: none">▪ We can able to control / monitor the system operation through web portal from anywhere.▪ Different sites can be able to monitor / control in single system.▪ SMS / E-Mail Notification for system abnormalities.▪ We can able to create dash boards for our various requirements like Energy Monitoring, Weather Monitoring.▪ Effective on monitoring of all significant energy control equipments



Innovative Projects Implemented

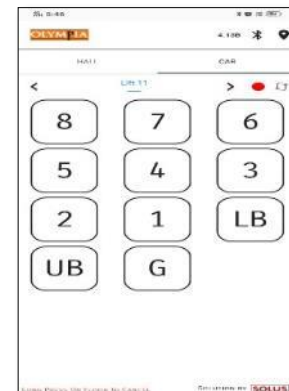
IOT Based Control Command Center



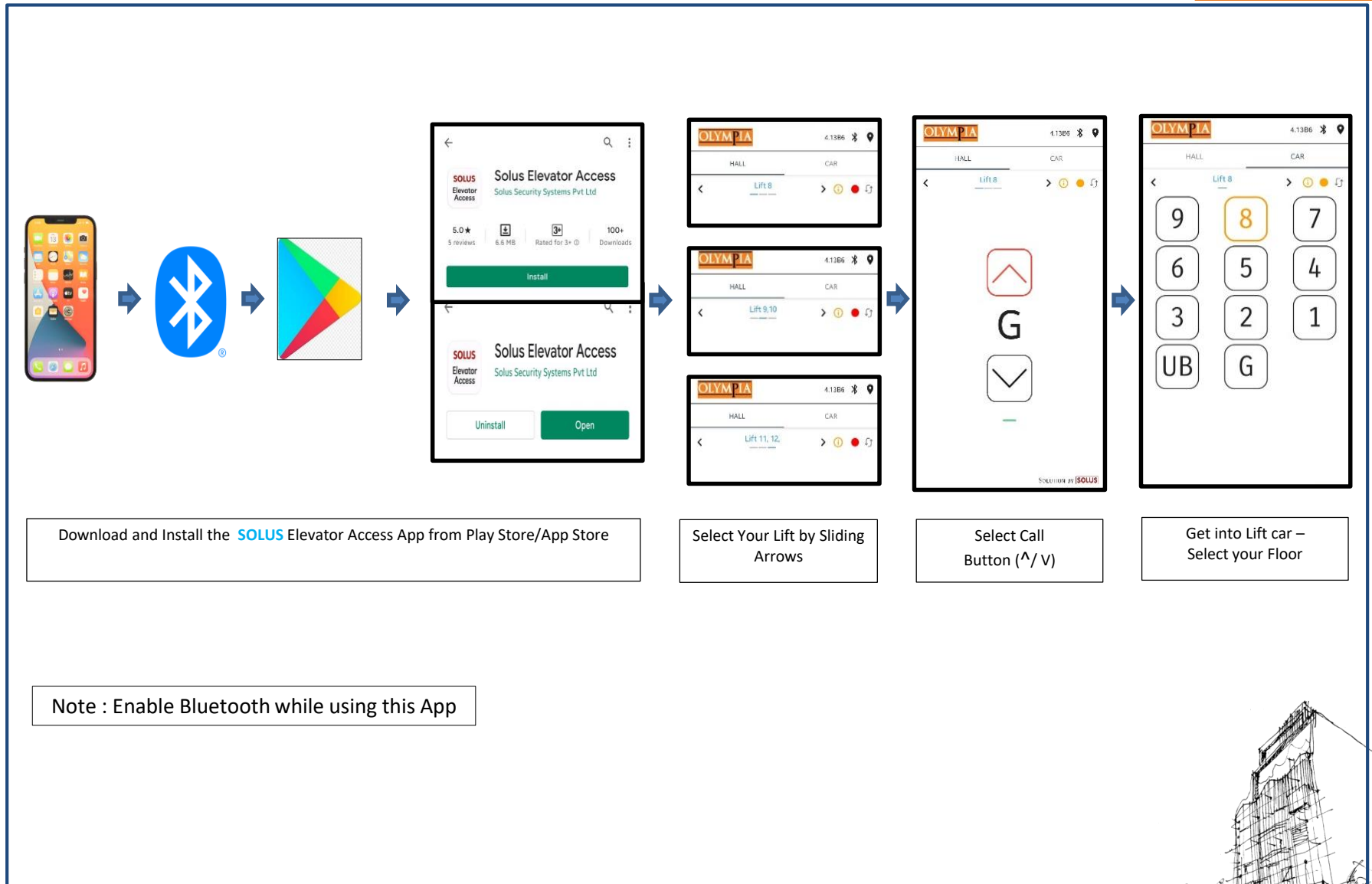
Innovative Projects Implemented

Touchless Operation of Elevator by using Android / IOS App

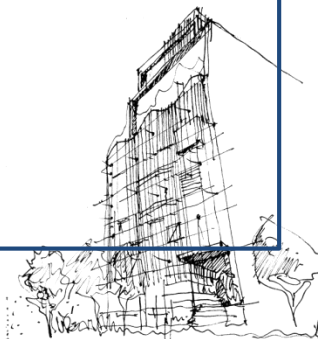
Source of Idea	Solution	Advantage
<ul style="list-style-type: none">▪ Generally, passengers utilize the lift by pressing the call buttons manually.▪ On account of COVID-19 there might be an outbreak of this contagious disease through the touch points on the call button in the lifts.	<ul style="list-style-type: none">▪ Installed Bluetooth device in every passenger lift car for easy and touchless operation which can controlled by using dedicated app for the lift movements▪ Bluetooth range will be available at the entrance of lobby.▪ Once entered the lift car floors can be accessed through the app.▪ Implementation Cost – INR 24.78 Lakhs	<ul style="list-style-type: none">▪ Easily accessible and minimizes the risk of outbreak of COVID-19.▪ Ensuring 100% hygiene is followed.▪ Touching of call button is purely avoided.



Innovative Projects Implemented

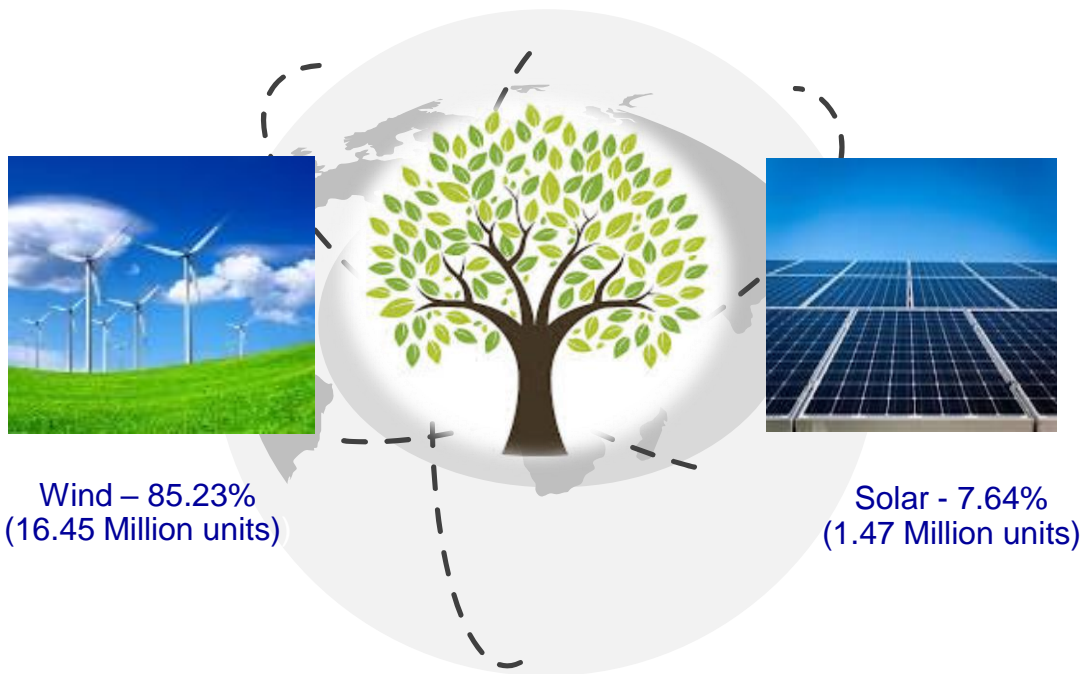


Note : Enable Bluetooth while using this App



7.Utilisation of Renewable Energy Sources FY 20-21

Type of RE	Type of Energy	Onsite/Off site	Installed Capacity (MW)	Generation (Million Units)	% of Overall Electrical Energy
Solar PV	Electrical	Onsite	1.1	1.47	7.64%
Wind	Electrical	Off site	14.05	16.45	85.23%



RPO Obligation

RPO Target fixed in Tamil Nadu

Year	Solar	Non – Solar	Total
2018-19	-	-	-
2019-20	6.75 %	10.25%	17 %
2020-21	6.75 %	10.25%	17 %

RPO Achieved at site

Year	Solar	Non – Solar	Total
2018-19	5.3 %	75.84 %	81.14 %
2019-20	5.54 %	72.95 %	78.50 %
2020-21	7.64%	85.23%	92.9%

Reference Source

<https://www.iexindia.com/>



Group Total Capacity & Unit Capacity (MW)

WINDMIL DETAILS – OFF SITE

S.No	WEG HT SC NO	Capacity in MW	Location
1	344	2.0	Theni, Tirunelveli, Udumalaipet.
2	683	0.75	
3	684	0.75	
4	772	0.95	
5	1545	1.65	
6	1545	2.0	
7	338	0.60	
8	779	0.60	
9	737	0.80	
10	79 (WGS – GA2 –T50)	0.85	
11	83 (WGS – GA2 –T54)	0.85	
12	3414	0.60	
13	917 (1885)	1.65	
Total Capacity (in MW)		14.05	



8.Waste Management



BINS PROVIDED IN INTERNAL AREA



BINS PROVIDED IN EXTERNAL AREA

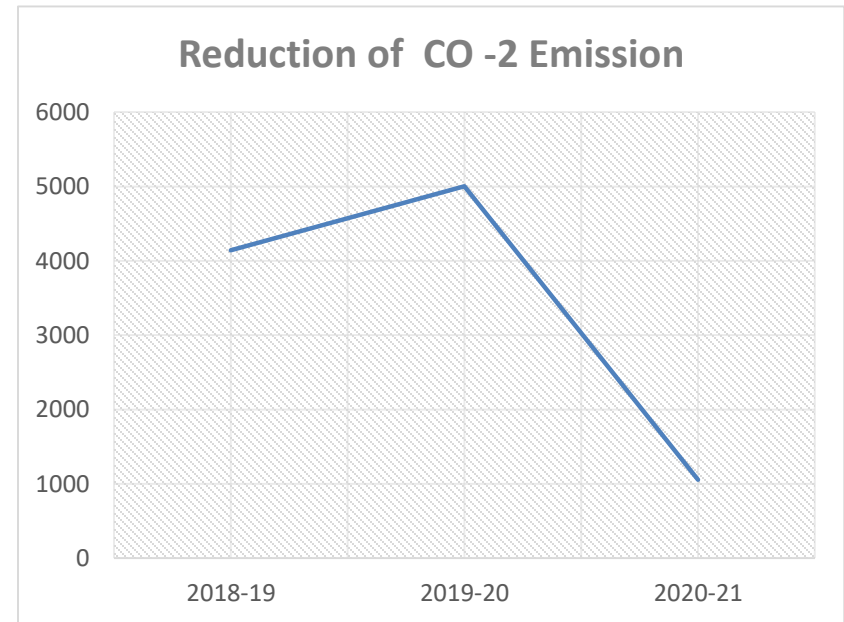
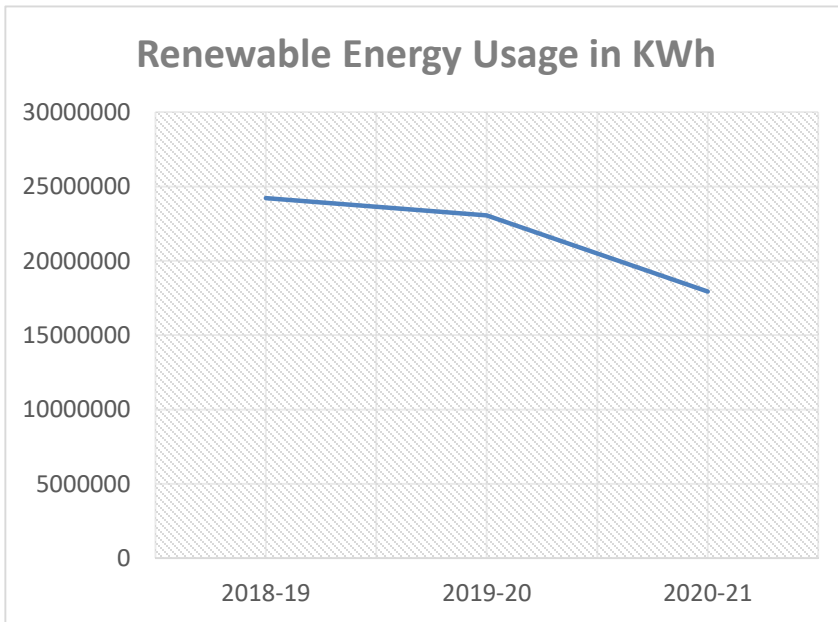


ORGANIC WASTE COMPOSTER

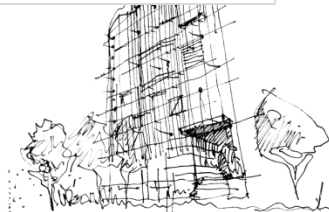


9.GHG Inventorisation

Year	Energy Consumption Details (in Kwh)					Ton of CO 2 Emission		
	TNEB	Wind	Solar	DG	Total	TNEB	DG	Total
2018-19	3725848	22639484	1582834	1904570	29852736	3055.2	1085.6	4140.8
2019-20	5612421	21433293	1628935	705110	29379759	4602.2	401.9	5004.1
2020-21	1090435	16454976	1475860	284610	19305881	894.2	162.2	1056.4



CO2 Emission Calculation



Target for CO 2 Emission Reduction

Action Plan :

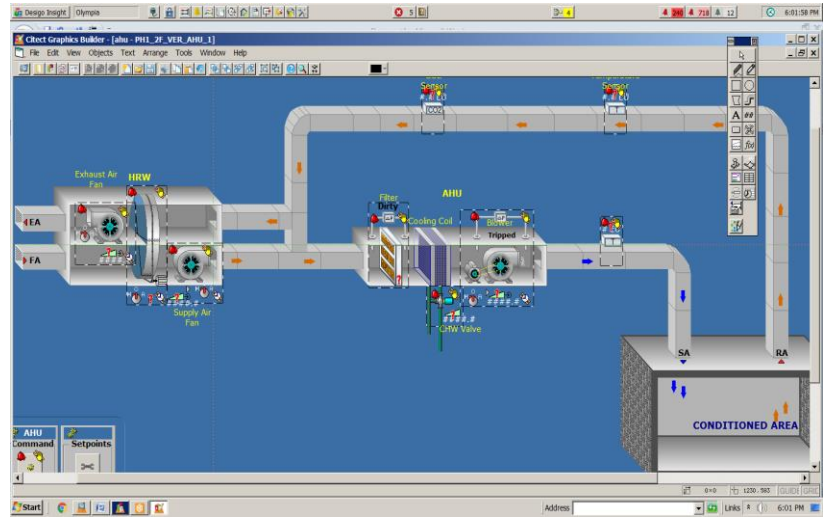
- a. Encourage the usage of Public Transportation and shuttle services by Employees.
- b. Increase the usage of renewal energy and reduce the energy usage of Utility and DG Sets.



10. Team Work, Employee Involvement & Monitoring



Integrated Building Management System for Monitoring and Control.



SIEMENS AHU RUN STATUS

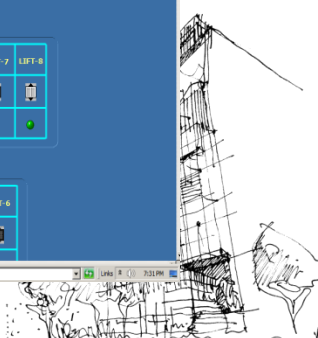
Zone	Unit	Mode	Pressure	Unit	Mode	Pressure	Unit	Mode	Pressure			
3F VERIZON NORTH	#COM	#COM	#COM	4F VERIZON WEST	Off	Normal	40 Pa	RBS 9F AHU-2	Off	Normal	5 Pa	SF VERIZON AHU-1
3F VERIZON NORTH	Off	Normal	3 Pa	SF VERIZON WEST	Off	Normal	-19 Pa	RBS 9F AHU-3	#COM	#COM	#COM	SF VERIZON AHU-2
4F VERIZON NORTH	Off	Normal	36 Pa	6F VERIZON WEST	Off	Normal	24 Pa	PH-3 RBS 7F AHU-1	Off	Normal	5 Pa	6F VERIZON AHU-1
5F VERIZON NORTH	Off	Normal	20 Pa	7F VERIZON WEST	Off	Normal	25 Pa	PH-3 RBS 7F AHU-2	Off	Normal	13 Pa	6F VERIZON AHU-2
6F VERIZON NORTH	Off	Normal	87 Pa	8F VERIZON WEST	Off	Normal	10 Pa	HEWITT 2F AHU-1	#COM	#COM	#COM	7F HEWITT AHU-1
7F VERIZON NORTH	Off	Normal	1 Pa	9F VERIZON WEST	Off	Normal	21 Pa	HEWITT 2F AHU-2	Off	Normal	-7 Pa	7F HEWITT AHU-2
8F VERIZON NORTH	Off	Normal	5 Pa	10F VERIZON WEST	Off	Normal	12 Pa	HEWITT 2F AHU-3	Off	Normal	9 Pa	8F DELL AHU-1
9F VERIZON NORTH	Off	Normal	-27 Pa	RBS 5F AHU-1	#COM	#COM	#COM	HEWITT 3F AHU-1	#COM	#COM	#COM	8F DELL AHU-2
10F VERIZON NORTH	Off	Normal	8 Pa	RBS 5F AHU-2	#COM	#COM	#COM	HEWITT 3F AHU-2	Off	Normal	44 Pa	9F DELL AHU-1
3F VERIZON SOUTH	#COM	#COM	#COM	RBS 5F AHU-3	#COM	#COM	#COM	HEWITT 3F AHU-3	Off	Normal	8 Pa	9F DELL AHU-2
3F VERIZON SOUTH	Off	Normal	8 Pa	RBS 6F AHU-1	#COM	#COM	#COM	HEWITT 4F AHU-1	#COM	#COM	#COM	10F HDI AHU-1
4F VERIZON SOUTH	Off	Normal	213 Pa	RBS 6F AHU-2	#COM	#COM	#COM	HEWITT 4F AHU-2	Off	Normal	23 Pa	10F HDI AHU-2
5F VERIZON SOUTH	Off	Normal	6 Pa	RBS 6F AHU-3	Off	Normal	13 Pa	HEWITT 4F AHU-3	Off	Normal	1 Pa	Vision 2F AHU-2
6F VERIZON SOUTH	Off	Normal	451 Pa	RBS 7F AHU-1	#COM	#COM	#COM	PH3 HEWITT 9F AHU-2	On	Normal	28 Pa	Vision 3F AHU-2
7F VERIZON SOUTH	Off	Normal	0 Pa	RBS 7F AHU-2	#COM	#COM	#COM	3F VERIZON AHU-1	Off	Normal	0.7 Pa	Vision 4F AHU-2
8F VERIZON SOUTH	Off	Normal	5 Pa	RBS 7F AHU-3	Off	Normal	-11 Pa	2F VERIZON AHU-2	Off	Normal	-11.7 Pa	Vision 5F AHU-2
9F VERIZON SOUTH	Off	Normal	111 Pa	RBS 8F AHU-1	#COM	#COM	#COM	3F REGUS AHU-1	Off	Normal	12.0 Pa	Vision 5F AHU-1
10F VERIZON SOUTH	Off	Normal	5 Pa	RBS 8F AHU-2	Off	Normal	24 Pa	3F REGUS AHU-2	Off	Normal	12.5 Pa	Vision 4F AHU-1
3F VERIZON WEST	#COM	#COM	#COM	RBS 8F AHU-3	#COM	#COM	#COM	9F VERIZON AHU-1	Off	Normal	-1.1 Pa	Vision 3F AHU-1
3F VERIZON WEST	Off	Normal	4 Pa	RBS 9F AHU-1	#COM	#COM	#COM	4F VERIZON AHU-2	Off	Normal	0 Pa	

SIEMENS LIFT STATUS MONITORING

PH-1 LIFT STATUS							PH-1 VERIZON LIFT STATUS							
DESCRIPTION	LIFT-1	LIFT-2	LIFT-3	LIFT-4	LIFT-5	LIFT-6	LIFT-7	DESCRIPTION	LIFT-1	LIFT-2	LIFT-3	LIFT-4	LIFT-5	LIFT-6
LIFT STATUS	On	On	On	On	On	On	On	LIFT STATUS	On	On	On	On	On	On
LIFT TRIP STATUS	Off	Off	Off	Off	Off	Off	Off	LIFT TRIP STATUS	Off	Off	Off	Off	Off	Off

PH-2 LIFT STATUS							
DESCRIPTION	LIFT-1	LIFT-2	LIFT-3	LIFT-4	LIFT-5	LIFT-6	LIFT-7
LIFT STATUS	On	On	On	On	On	On	On
LIFT TRIP STATUS	Off	Off	Off	Off	Off	Off	Off

PH-3 LIFT STATUS						
DESCRIPTION	LIFT-1	LIFT-2	LIFT-3	LIFT-4	LIFT-5	LIFT-6
LIFT STATUS	On	On	On	On	On	On
LIFT TRIP STATUS	Off	Off	Off	Off	Off	Off



Review Meeting Chaired by

Level -1 Review Meeting → by Shift Engineer on weekly basis.

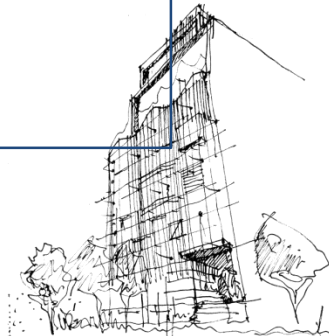
Level -2 Review Meeting → by Technical Manager once in two weeks.

Level -3 Review Meeting → by Property Manager once in a Month.

Level -4 Review Meeting → by Top Management once in 3 months.

Discussion Points :

- Further improvement of building operations.
- Optimisation of Energy & Water Consumption.
- Awareness training on energy & water conservation measures.



Energy Efficiency/ Awareness Training Program



Note :Training was conducted pre COVID-19 period.



Raise Awareness

Management organizes activities, seminars, forums and events regularly to share information on best practices of energy review mechanism, understand what common issues exist, and take steps to improve energy efficiency.

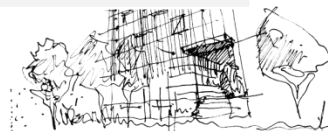


Projects Implemented through Kaizens

Prevention of red soil spillage over kerb blocks



Source of Idea	Solution	Advantages
<ul style="list-style-type: none">• During Rain season paver block & Granite tile are getting mud & floor are look very dirty• HK staff would find it difficult to clean during rainy time.	<ul style="list-style-type: none">• We have removed one layer of soiled• Filled with river sand top of the same• Pebble stone has been placed edge	<ul style="list-style-type: none">• Paver block & Granite floors remain from the stain• Manpower, cleaning tools & chemicals utilized on this activity are reduced.• Ambience looks good



11. Implementation of ISO 50001 / IGBC Rating

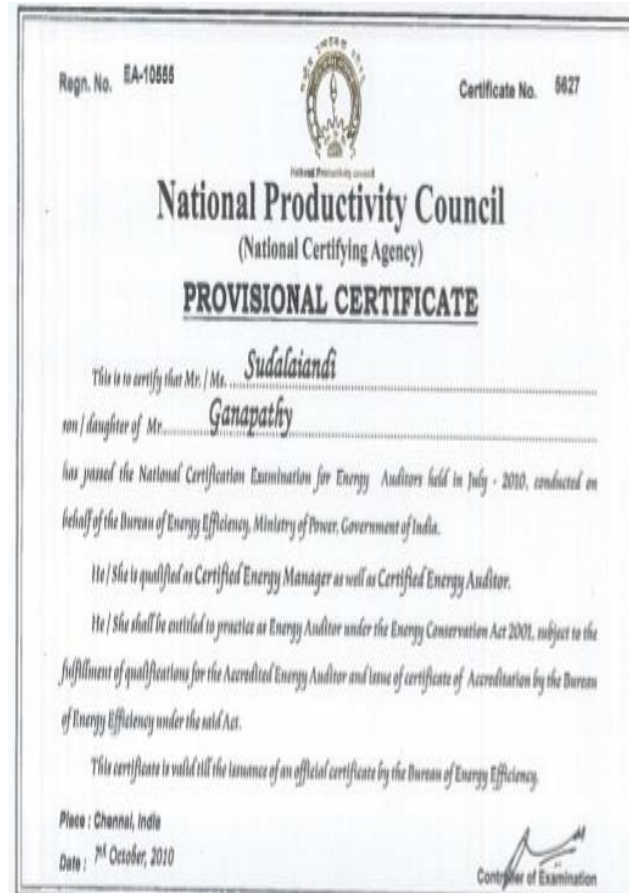
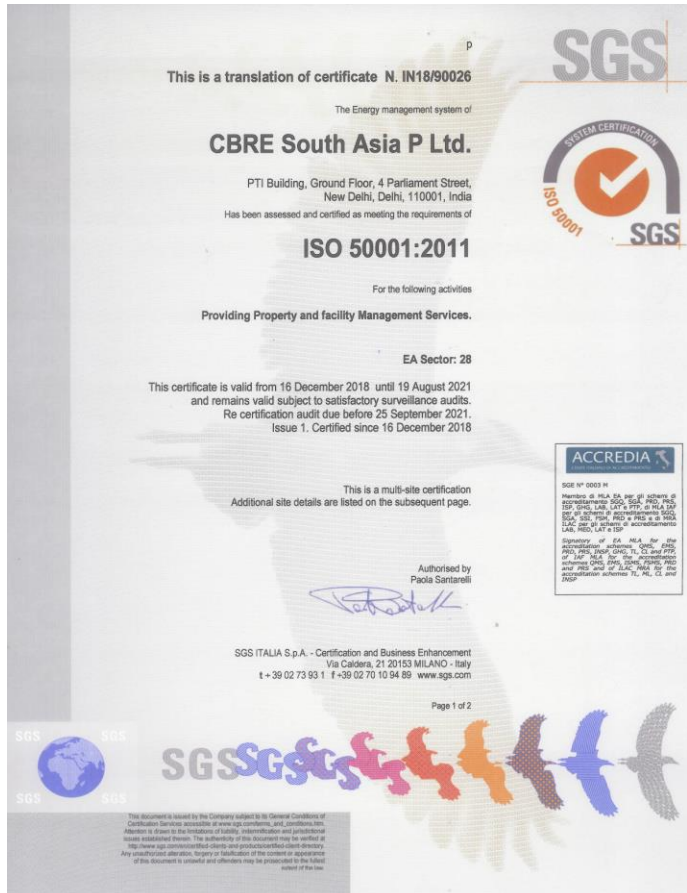
IGBC Rating

Olympia Technology Park has obtained Platinum Certification in June -2020 from IGBC for existing building category



Implementation of ISO 50001

Engaged an ISO 50001 Certified Agency & Energy Auditor to implement ISO 50001 at site



12. Learning from CII Energy Award

- Radial Cooling System and its advantages.
- Net Zero Energy Buildings.
- ISO 50001 Certification from IGBC.
- GreenCo rating system.
- Innovation implemented by other companies.



Other Relevant Information

USGBC LEED Certification for GOLD

Excellent Energy Efficient Unit Award- 2019 from CII

Excellent Energy Efficient Unit Award- 2020 from CII

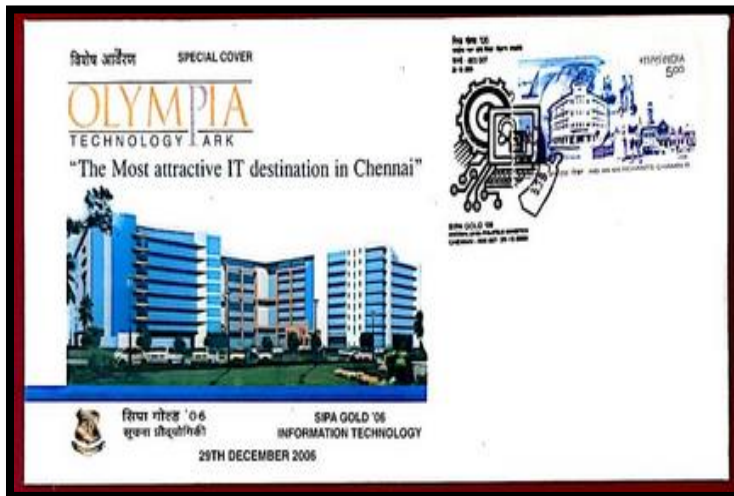


Other Relevant Information

Postal Dept. has released the special cover with Olympia Tech Park image on 29.12.2006

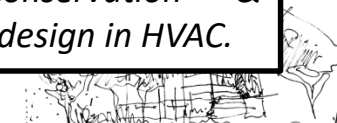
Best Green Building Award

Best HVAC Design Award



Gireem Award was conferred upon Olympia Technology Park for the best green building in India - 2009.

Olympia Technology Park was awarded "The BRY AIR AWARDS 2008" for the "Best HVAC Design" and this award is in its 3rd year and considered as prestigious for it certifies excellence in Energy conservation & Innovative design in HVAC.





Thank you

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