

NATIONAL ENERGY CONSERVATION AWARD – 2007
OFFICE BUILDINGS

COMPANY PROFILE

PBC™ - STIP provides office facilities on a “Plug & Play” basis.

PBC™ - STIP as a 'partner of choice' offers a suite of 28 support services to its clients in Delhi and NCR. We have been a leading provider of office facilities and services to Corporate & fortune 500 companies planning a foray into India. We believe in winning – being the best in our business. Care for the environment is intrinsic to our approach to business. PBC™-STIP, with an individual annual turnover of Rs. 17.44 crores is an SME in service sector. It is located at 21, Nehru Place Greens, New Delhi with total number of employees exceeding 500 including crewmembers. The total built up area of our building is 50400 Sq Ft.

PBC-STIP is involved in the business of providing furnished office space & office services facilitating business through these services at one stop. It provides the following services:

Conferencing, Banqueting, Art Gallery, Rent-a-cab services, Advisory and Consultancy to foreign and Indian companies (Business Valet), Food and Beverage, Providing Farm Fresh Greens thru Green Grocer, Housekeeping, Travel & Tour services, Internet provider, Security, Engineering and Safety, e-enabled business, process outsourcing, public relations, marketing, besides having a state of the art & high tech, fully connected easily accessible business center in the heart of the city.

BUSINESS CENTRE AMENITIES

- An independent seven storied building covering an area of 50,000 sq. Ft.
- Centrally Air-Conditioned
- 100% Power Back-Up
- 24 hours security, equipped with a fire alarm and protection system
- Reserved Car Parking
- Bandwidth On Demand
- Indoor Air Quality conforming to USA, ASHRAE Standards
- Electronic Signage
- Zero VOC (Volatile Organic Compound) Carpets in all suites
- Ergonomically & Aesthetically designed office interiors
- Biometrics
- CCTV surveillance & Access Control Systems installed for enhanced security
- Wi-Fi enabled building



OUR VISION

- Winning, being the best in business
- Commitment to the highest level of customer and stakeholder satisfaction
- Friendly service and excellent value
- Honesty and absolute integrity – quality business ethics
- Sensitive to the care for our environment and social responsibility
- Respecting and encouraging each individuals ability, creativity, entrepreneurship, initiative, opportunity, responsibility and fostering continuous self-improvement
- Work hard yet keep it fun

OUR MISSION

To be the preferred supplier of support services to corporates in the Greater Delhi Area

CERTIFICATIONS & AWARDS

PBC™ -STIP is perhaps the only Business Centre in India with six international Certifications as under:

- ISO 9001:2000 Quality Management System
- ISO 14001:2004 Environment Management System
- SA 8000:2001 Social Accountability
- OSHAS 18001:1999 Occupational Health and Safety
- HACCP: 2002
- ISO 22000:2005 Food Safety Management System

AWARDS & ACCOLADES

1. PBC™ - STIP was given the GreenTech Silver Award 2002 for Environmental Performance & innovative initiatives in the filed of Environment.
2. Selected by CII as one of the four companies in India for Corporate Sustainability Management Systems and was showcased at the World Summit for Sustainable Development, Johannesburg 2002.
3. Received Ethics is good Business award in December 2005 from *H.E. Dr. A. P. J. Abdul Kalam*, Hon'ble President of India.
4. Received Certificate of Merit from IMC Ramakrishna Bajaj National Quality Award 2006 in the Small Business Category.
5. Received the coveted Golden Peacock Award 2007 for Environment Management, instituted by the World Environment Foundation.
6. Received the most admired, top honoured & prestigious Greentech Environment Excellence Gold Award 2007, from Greentech Foundation

PBC™ - STIP COMPLIANCE WITH STATUTORY AND OTHER REQUIREMENTS

- Delhi Prohibition of Smoking and Non-Smokers' Health Protection Act, 1996 issued by NCT.
- Delhi Fire Safety and Fire Prevention Act, 1997
- ASHRAE standards
- Control of Water pollution by segregating the solid material while washing utensils issued by Delhi Pollution Control Committee Department of Environment, Govt. of N.C.T of Delhi for eating-places, Dhabas, Small Restaurants etc.
- Lift License
- MCD Health Department License
- Eating house Certificate from DCP
- L-4, Bar License
- Sales Tax registration
- Shops & Establishment Act

ENERGY CONSERVATION ACHEIVEMENTS

AIR QUALITY INITIATIVES

The Indoor Air Quality with in PBC™ - STIP conforms to the parameters defined by the ASHRAE standards (American Society of Heating, Refrigerating and Air-conditioning Engineers). Bio -Technology is also used to improve Indoor Air Quality.

PBC™-STIP is an environment friendly service industry and does not emit any pollutants to the land, air & water. So no environmental sensitive targets around the organization are identified. "We Care for Environment".

Measures taken to abate / mitigate pollutants – Indoor Air Quality (IAQ) is one of our USPs at PBC™ - STIP conforming to ASHRAE Standards. Toxin removing plants like the Areca Palm and Sansevieria Trifasciata are used. There are more than 1600 plants in the entire building.

A positive pressure is maintained in the building. Air curtains are installed at all exit and entry points to reduce infiltration of hot and polluted air. All incoming material is thoroughly cleaned before it enters the building. Wall-to-Wall carpets are vacuumed to reduce the SPM level in the building AHU filters are cleaned on a daily basis to reduce energy consumption.

A dedicated IAQ team does a 24X7 monitoring of Oxygen level, Humidity etc. And above all it is a big business for us – We sell CleanAir – IAQ services by offering consulting services, analysis of ambient & indoor air, etc. We surely can help & are helping other large corporates in creating a mountain fresh environment in their respective offices as well.



A View of Green House at PBC™-STIP

ENERGY CONSUMPTION

S. No.	Year	Energy Consumption (Lakh kWh)
1.	2004-2005	9.51
2.	2005-2006	10.7
3.	2006-2007	11.17

Note: Increase in Energy Consumption is subject to increase in occupancy & number of conferences

OCCUPANCY TABLE & CHART

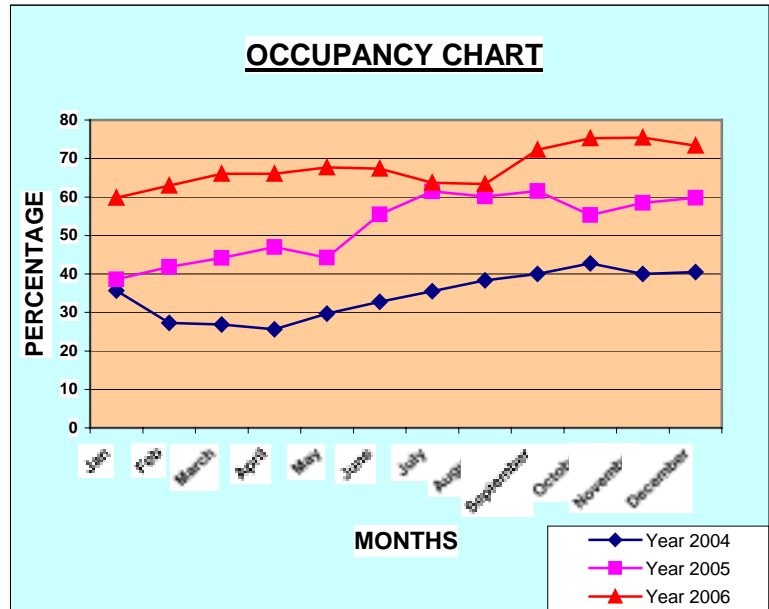
Since PBC™ - STIP is a service industry providing office space and others facilities, the data on occupancy utilization of space is given below for past 3 years:

PAHARPUR BUSINESS CENTRE AND SOFTWARE TECHNOLOGY INCUBATOR PARK

Occupancy Status Table (in %)

Occupancy Status chart

Months	Year 2004	Year 2005	Year 2006
Jan	35.65	38.60	59.83
Feb	27.24	41.80	62.92
March	26.90	44.15	66.02
April	25.62	47.02	66.03
May	29.68	44.25	67.73
June	32.78	55.47	67.33
July	35.53	61.48	63.66
August	38.37	60.11	63.39
September	40.02	61.56	72.27
October	42.77	55.32	75.27
November	40.03	58.43	75.41
December	40.51	59.83	73.36



ENERGY CONSERVATION INITIATIVES

- Installation of Heat Recovery Wheels
- Installation of Air Washer
- Use of Compact Fluorescent Light, Next Generation Tube light and Electronic Chokes
- Motion Sensors Installed at Toilets
- Solar Films
- Green Mesh
- Heat Reflecting Paints
- Mist Fans installed on rooftop to cool down the roof. This helps in bringing down the temperature by 4-6 degrees Celsius and saves energy consumed for cooling.
- The company also chills water at night to use for cooling during the day.
- Power consumption is monitored and units recorded at strategic points for analysis.
- Good Quality stabilizers are used and a power factor of 0.99 is maintained.
- Separate DG Sets are installed as per load requirement to save on energy and for optimizing the use of DG sets.
- High Efficiency Super Diesel is used for all GD sets to reduce pollution.
- Stack height has been increased for the DG set emissions as government norms.

HEAT RECOVERY WHEEL (HRW)

In Paharpur Business Centre we follow the ASHRAE Standards. According to these standards 20 cfm of fresh air should be supplied for each occupant in a close air-conditioned building.

At PBC, we suck fresh air from the optimum height where the pollution level is comparatively lesser than the air at the lower level. As the fresh air during the summer season is very warm e.g.- If the ambient temperature is 42 degrees and if the same is pumped into the building as per the number of occupants then the pressure on the chiller would be very high to maintain the temperature in the building.

Therefore, to reduce the pressure on the chillers we have installed a Heat Recovery Wheel, which is designed as per the specifications fixed by ISHRAE, The Indian Chapter of ASHRAE.

HRW is basically, used for exchanging the heat from the incoming air sucked from the ambient to the outgoing air from the building, while the coolness of the outgoing air is transferred to the incoming fresh air.



Heat Recovery Wheel

AIR WASHER

We have installed an air washer on the top of the building at the air suction point. The main function of the air washer is to remove the Suspended Particulate Matter (SPM) from the fresh air and increase the moisture level in the air as a result of which the temperature of the incoming air drops down. Due to this technology, the load on the chillers is reduced to a great extent.

USE OF COMPACT FLUORESCENT LIGHT, NEXT GENERATION TUBE LIGHT AND ELECTRONIC CHOKES

CFL's

Initially at PBC, we were using 406, 40 W GLS bulbs, in order to maintain 350 LUX level at the work place as per the ASHRAE Standards which was consuming 16,240 W. Now, we have replaced all the 40 W bulbs to 9 W CFL which straightaway saves 31 W per bulb. Details of all the Bulbs replaced by CFL's are mentioned below:

Currently PBC is Using CFL (A)	Equivalent GLS Lamps required for same lumens (B)	Fixed Quantity in use (C)	Power Saving Per hour (B – A) x C
9 Watts	40 Watts	406	12,586
10 Watts	60Watts	135	6,750
11 Watts	60 Watts	99	4,851
Total Energy saved			24,187

The total energy saving due to the change is of 24,187 W per hour.



CFL

NEXT GENERATION TUBE LIGHT AND ELECTRONIC CHOKE

At PBC, we have replaced 1536 traditional tube lights with 1162 next generation Tube lights and all the old copper chokes were replaced with the electronic chokes while maintaining the LUX Level as per the ASHRAE Standards.

Type Of Tube Light	Cost (in Rs)	Power Consumed in Watts	LUX level At 2.5 feet
White Light 36 Watts with copper choke of 40 Watts.(Nominal lumens:2450)	Tube: Rs. 38 Choke: Rs. 95	47.9	476
Phillips TLD 84NG, Yellow 36 Watts with Electronic Ballast (Nominal lumens:3250)	Tube: Rs. 65.25 Industrial Choke: Rs. 370	32.9	528

PAHARPUR BUSINESS CENTRE AND SOFTWARE TECHNOLOGY INCUBATOR PARK

We were able to save 35,345 W per hour.

MOTION SENSOR

We have installed motion sensor lights in the bathrooms and lobbies throughout the building in order to control the misuse of electricity. These sensor lights automatically gets switched on as soon as it senses the human presence, rest of the time it remains off.



Motion Sensors

GREEN MESH

The Total West side facing glasses in PBC is of 3,360 sq ft. We have placed Green Mesh in the balconies in order to reduce the heat gained from sunrays. By placing green mesh we have noticed a substantial drop in temperature inside the room, the temperature differential observed between ambient and balcony (between the green mesh and the window) is between 3-4 degree C. The temperature differential between the balcony and inside the room is between 5-6 degree C.

We have placed green mesh in all our west facing balconies in order to stop the direct sunlight into the rooms in turn reduces the load on the chiller similarly, we remove the green mesh during the winter season in order to allow direct sunlight inside the rooms to reduce the load on the heater.



Green Mesh

SOLAR FILMS

All the windows at PBC have solar films on it; this has primarily been done in order to reduce the heat penetration into the building.



Solar Films

As a result of all energy efficient practices PBC has been able to reduce it's MDI from 735 KVA to 552 KVA

WATER CONSERVATION INITIATIVES

- Installation of Drip Irrigation
- Using of Soap Free Water for Gardening
- Installation of waterless urinals.
- Installation of Dish Washer
- Rainwater Harvesting
- Water Sensors Installed at Toilets

DRIP IRRIGATION

All our balconies in our building also have a large number of plants with drip irrigation, which helps to reduce the heat as it increases moisture in the air



Drip Irrigation

USING OF SOAP FREE WATER FOR GARDENING

After an extensive research we have come to a conclusion that we have approximately 150 liters of soap free waste water going into the drains. Looking at the scenario we decided to reuse the wastewater by channeling the flow towards the garden for irrigation purpose. This not only helped us in saving water but also saving electricity as now we do not use pumps for gardening purpose.



Soap free water pipeline going to the garden

WATERLESS URINALS

After the installation of water less urinals we observed that the frequency of filling the common water tanks has reduced substantially. This in turn has resulted into energy saving, as the pumps consumed a large amount of energy.

We had installed motion sensors for automatic Flush Control System but now as Waterless Urinals has been installed the electricity consumed by these automatic flush control systems is also saved.



Waterless Urinals

RAIN WATER HARVESTING

Concerned with the depleting water resources, PBC collects the rainwater from the roof with a total catchment area of 4,684 square meters (concreted) with an investment of Rs. 0.50 Lakhs and through pipes it goes to an underground tank where we filter the collected water and recharges it back into the ground. We made feedback structures with 100mm dia. As per the average rainfall of 211 mm at New Delhi from 2004 to 2007 and a 'run off' factor of 0.90 on, the average water than back to soil is 8,894.91 **Liters / year**. This technology has been provided by: Centre For Science And Environment, New Delhi. The surface water from the surrounding areas is diverted to a well in the NPG park from where the ground water is recharged. Ground water level increases and the total water available for use increased. Due to raise in water level, the working head of the pumps reduces and takes less pumping power. Quality of water improves due to the reduction in hardness. Eco systems enhanced with more ground water availability.



WATER SENSORS INSTALLED AT TOILETS

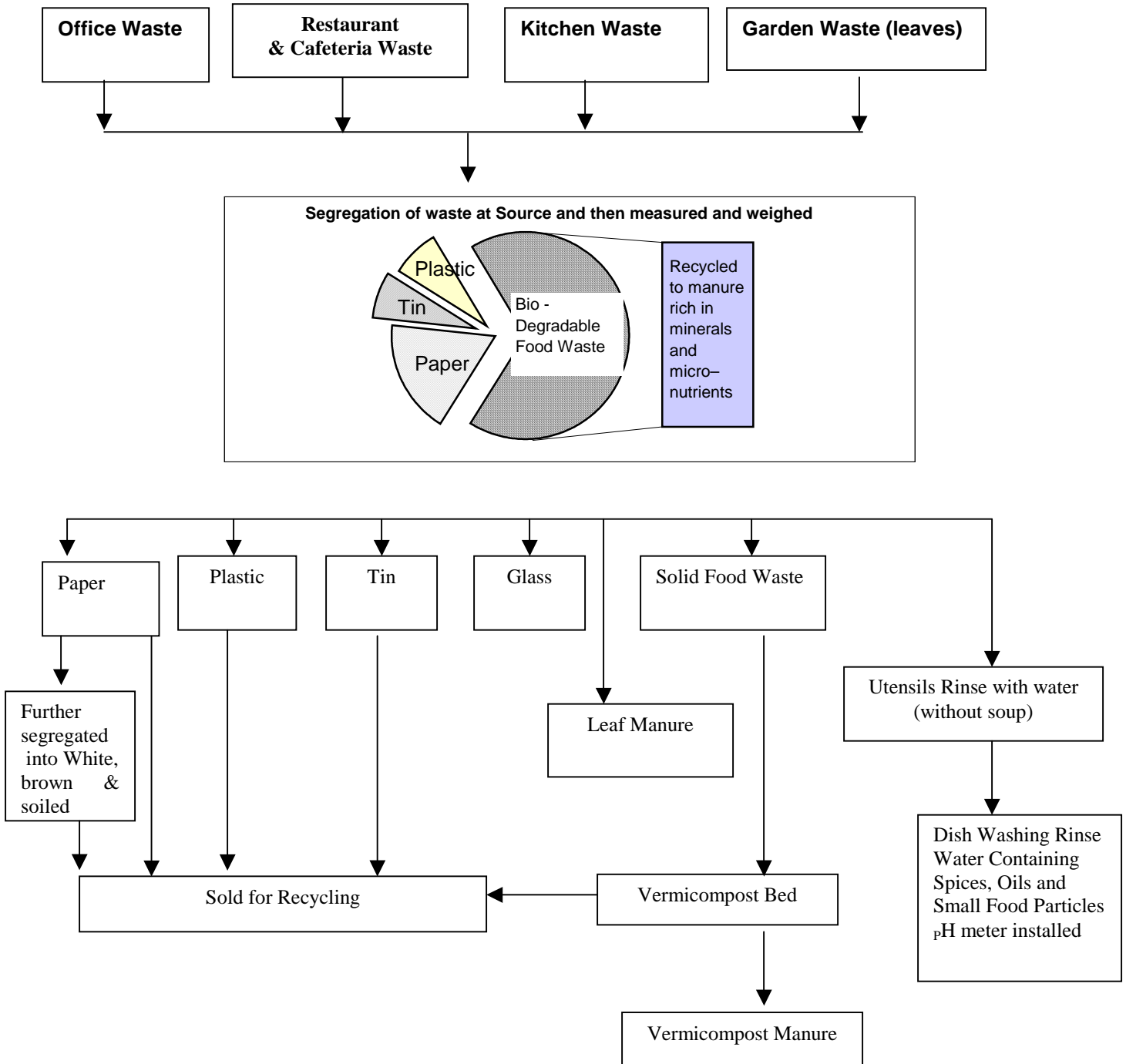


Water Sensors

SOILD WASTE MANAGEMENT

- Use of internal electronic mail for correspondence- towards a paperless office
- Reuse of one-sided paper
- Recycling of all paper waste
- Reuse of plastic bottles
- Segregation of waste at source
- Vermi-composting

Aiming for Zero Solid Waste



TRAINING & AWARENESS PROGRAMMES ON ENERGY SAVINGS

PBC™ - STIP also organized various training & awareness programmes based on Energy Efficiency for our team members, in which we created awareness & promoted the use of CFL & Energy Efficient Lighting Options. We encouraged our Team Members, including our crew members to use these at home and also provided soft loans to them to replace atleast two GLS lamps with 2 CFL lamps. Subsequently we also took an undertaking from each employee on replacement of GLS bulbs with CFL bulbs at their homes.



Training programme conducted for crewmembers

We also conduct regular training programmes for vendors & suppliers to guide them about the policies and standards of PBC™-STIP



Training programme for vendors & suppliers

PAHARPUR BUSINESS CENTRE AND SOFTWARE TECHNOLOGY INCUBATOR PARK

We celebrate "Earth day" & "World Environment Day" every year wherein we organize programmes related to awareness on environmental aspects.



Banners at PBC™-STIP displayed during Earth Day function

In the year 2007 we invited Indo-Asian to set up a sale counter / stall to create awareness on Energy Efficient Lighting Solutions at our Business Centre.



Indo-Asian Stall outside PBC during Earth Day Celebration

PAHARPUR BUSINESS CENTRE AND SOFTWARE TECHNOLOGY INCUBATOR PARK

We also invited School children to sensitize them to the various issues relating to Environment & how each individual can take small steps to save our planet – “Earth” from the imminent dangers of Global warming. As we feel that care for the environment has to be nurtured & taught to each child from the very beginning in order to create responsible corporate citizens for the future.



Students from Delhi Public School keenly observing the presentation made for them on Earth Day



Students watching Al Gore's "An Inconvenient Truth" – a stirring documentary focussing on Global Warming