

Bachat Lamp Yojana

A Commercial Feature

"BLY aims to reduce carbon emissions and curb energy consumption"

With a handsome growth across its business verticals, HPL is looking to increase its turnover to Rs 1,500 crore from the current Rs 1,000 crore. **MPL's Director Rishi Seth** speaks about the company's business and BLY to Business Standard. Excerpts

Tell us about the new range of products being offered HPL especially under BLY?

Bachat Lamp Yojana (BLY) is CDM based Small scale programme of activity (SAC-PoA) initiated by BEE in association with empanelled Manufacturer with an objective to reduce the carbon emission & saving of energy Consumption by replacing ICLs by energy efficient CFL.

HPL is providing high energy efficient CFL with long life (10,000 Hours) under BLY to implement scheme successfully. These CFLs are being distributed and fitted House to house in exchange of old & used ICL bulbs.

Salient features of HPL make CFL (Being supplied under BLY) are as follows:

Lamp Life: 10,000 Hours (Comply IS-15111(2002))
Lumen Output: more than ICL (Comply IS-418 (2004))

Power Factor: > 0.85
Voltage Range: 150v to 280v

Energy Saving: more than 80% Compared to conventional ICL

11 W CFL replacing 60W ICL
18 W CFL replacing 100W ICL

HPL is the pioneer in implementation of BLY project, since we are the first private company in India who have registered 7 CPAs with UNFCCC. The reason behind this is our superior quality of CFL which can sustain 10,000 hrs as per IS-15111(2002) & provide better illumination than Conventional ICLs as per IS-418(2004)

Besides, HPL is a reputed manufacturer & supplier of various power utility products like LT Switchgears,



HPL - CFL Factory at Sonapat

Electronic Energy Meters, Energy Management Systems, Protection Devices, CFL Lamps, Luminaires and wire & Cables etc.

Do you perceive a threat from cheaper chinese products? How is the company facing the competition?

As far as BLY project is concerned we don't perceive any threat from chinese products.

As this project demands high quality product that can sustain 10,000 hours (8 years) with very low failure rate, because this project is not a Sale-Purchase agreement. Also the CFL should be designed to cater to Indian rural electricity condition. BLY is purely an energy saving project in which we have to earn through carbon emission reduction (CERs), so, only high energy efficient product can sustain in this project. The energy efficient CFL must comply given specification above in ques no-1

No power utility would allow any cheaper chinese products which don't last for entire project life. Since, this will affect energy saving for the utility as well. Therefore, we don't face any competition neither do we have to make any special efforts to deal with it.

Energy Conservation is turnout to be major challenge today, what kind of energy efficiency is promoted by company?

Energy conservation is a national challenge and in pursuit of energy conservation HPL is promoting energy saving projects like Bachat Lamp Yojana in several states like Karnataka (Bangalore), Mysore & Mandya) & Goa.

We are on the verge of completion of BESCOM project in which HPL is covering 7 CPA (approx. 14 lacs

consumers). After completion of this project every CPA will be saving average 50Gwhr every year.

This huge reduction in energy consumption directly impact demand side management.

After this project Bangalore will be in position to supply electricity in the villages which are highly affected by non-availability of electricity because of high demand in urban areas.

Or this state may be in position to export electricity to other states also as well.

Apart from BLY, HPL is also promoting energy efficient LED street lighting system, which is the superior lighting system over conventional lighting. Some of the key features of HPL make LED lighting are as follows:

Operating Life span : > 50,000 Hours (L70 criteria)
Lamp efficacy: > 100 lumen /watt

System management: multiple LEDs are used in series - parallel cluster

PF:>0.95
THD:<10%
CCT- 5500k to 6500k

HPL is also providing Solar based Lighting solutions including Street light, Lantern & home lighting solution.

HPL has a great vision to promote DSM (demand side management) project which is based on conservation of energy.

Should the government provide incentive for energy efficient products?

In the BLY, Government is not providing any incentive. While we are getting only Rs.15/- per CFL from consumer to run BLY project and rest we have to earn

through CERs.

After implementing Bachat lamp yojana, HPL is saving more than 50Gwhr per CPA per year for utility, this saved energy can be used by DISCOM to supply in needy area or they can export in other state and earn good profit while producing same amount of energy. In this view Govt. should provide some subsidy or incentive to implement/investors in such scheme.

HPL is registered as an ESCO (Energy Service Company) with BEE & plans to undertake energy audit of bigger commercial establishment for saving of energy.

Hard fact is that recently there is very High price hike (8 times on earlier rate) in the rare earth material (Tri-band Phosphor) which is used in manufacturing CFLs. In view of this we requested BEE to formulate some method to compensate the manufacturer-investor in order to offset this huge cost increase to make this project viable.

What are the challenges faced by sector in which you operate?

In BLY project there are certain challenges we had while implementing BLY in bangalore.

1. Awareness campaign in a very High area about BLY and let people understand the scheme & its benefits to have successful penetration in that Area.
2. Door to door visit to implement BLY scheme.
3. Distribution of CFL & collection of ICLs & its storage.
4. repeated visit for more than 90% penetration.
5. High data management & its maintenance.
6. Replacement of CFL for one year if failed
7. multiple surveys & verifications.
8. Disposal of collected ICLs & fused CFLs as per BLY norms.
9. VAT is being Bourn by investor, it should be exempted for such energy saving schemes.
10. Maintenance of High documentation to earn CERs.

What is the growth seen by the CFL industry?
The growth seen in the CFL industry under current scenario is expected to be around 15-18% per annum.

What are the areas in Karnataka & Goa, your company is supplying CFL under bachat lamp yojana scheme? Please elaborate.

HPL is implementing BLY in various region of Karnataka as follows:

1. Bangalore Rural Circle
2. Kolar circle

Rishi Seth
Director,
HPL Electric & Power Pvt.Ltd.

3. Mysore Circle
4. Mandya circle
In Goa (Electricity Department of Goa) there are two blocks for implementation of BLY .
1. North Goa
2. South Goa

What kind of expansion is lined up in the HPL group?

HPL has recently invested over Rs. 100 crores to build two new manufacturing facilities covering an area of around 4 lacs sq. ft. One of these facilities is for manufacturing Lighting Luminaires and Street Lights ; Electrical Switchgears like ACB's, Contactors, MCCB and specialized Panels etc. The other new facility is for the expansion of Electronic Energy Meter Division. Besides this, HPL is executing certain turnkey project for Railways and 220 kv substations in different parts of the country. These are HPL focused growth area during the current financial year.

What is the company's vision with regard to BLY?

Our company is strongly associated with this unique energy saving scheme BLY initiated by BEE and registered with UNFCCC.



CFL - Burning Unit at Sonapat

Intelligent use of lighting can help save energy and money

In this modern day and age, we are completely dependent on appliances and gadgets to make our lives more comfortable. But most of these appliances run on energy (electricity) and their constant use, coupled with the rapid increase in demand, is aggravating the already grave situation of scarce energy resources. At an individual level, this also causes the problem of huge electricity bills for the consumers.

Some people debate that electrical appliances, especially lights, should remain switched off for as long as possible. But no matter how hard you try, this is neither possible nor feasible. Light affects our health, safety, morale, comfort, and productivity; and the quantity and quality of light around us determine how well we see, work and play. In your home, you can save energy without having to compromise on the light quantity and quality by taking some simple yet important decisions.

To start with, you can carefully choose the lighting fixtures to be installed in your home. These should be chosen keeping in mind their energy efficiency, size of the space and the availability of alternate light sources such as natural light. Newer technologies such as CFLs, LEDs and the new sleek T5 tube lights are up to 10 times more energy efficient than the traditional incandescent bulbs and offer great savings. You should ensure that the products installed are certified and labeled lighting fixtures.

If chosen correctly, these could considerably bring down the running, maintenance and replacement costs. Hence, you should look at lights and lamps as investments and choose them wisely rather than picking them off the shelf. For instance, if you install six 14w CFLs in your house instead of six 60w GIs lamps that stay on for 8 hours each day on an average, you will get the same light output while consuming only 0.6 units of electricity as against consuming 3 units of electricity in case of GIs lamps. This results in energy savings of 2.4 units per day or 876 units per year. This translates into annual energy savings of over INR 5,000 and huge net savings after considering the initial cost of the lamps replaced too. Plus, you could save even more by replacing GIs lamps/ halogens of even higher wattage with CFLs or T5 tube lights.

Leading brands like Philips are also partnering with state governments as part of the Bachat Lamp Yojana program by the Bureau of Energy Efficiency for replacement of GIs lamps with CFLs. Philips has also distributed CFLs to households in Kerala that helped the state achieve peak load reduction and reduced CO2 emissions. As part of the program, Philips helped the Kerala government by providing 15 million CFL lamps for 7.5 million households in Kerala. This was a big step for both the government and the company as it targeted a peak load reduction



Mr Nirupam Sahay
Sr Director-Marketing,
Philips Lighting India

of ~300 MW, and reduction in CO2 emissions by 0.5 million tonnes per annum. Philips also supplied 2.6 million CFLs to replace incandescent lamps in the Indian Railways Housing colonies across the country. The switch is aimed to benefit 0.7 million railway employees by reducing their energy consumption, and the environment by reducing CO2 emissions by 0.1 million tonnes per annum.

The second part is installing these lights. You may install motion sensors or dimmers to reduce the amount of time your lights are on. These sensors automatically detect movement and switch on/ off the lights when someone walks in/ out of the room hence preventing energy wastage. The installation of such intelligent technology coupled with the use of energy efficient lamps/ lighting solutions will ensure that energy is spent properly and wisely.

You should also take advantage of daylight by using light-colored, loose-weave curtains on your windows to allow day-

light to penetrate the room while preserving privacy. Having light-colored walls helps to reflect daylight better and helps in reducing the amount of artificial light needed. You may also consider having three-way lamps as they make it easier to keep lighting levels low when brighter light is not required.

An area of the house that we generally ignore is the outdoors. Here, the lights switched on at night are usually switched off later in the day, much beyond the time that these lamps are actually used. You may install bright CFL lamps in these spaces as it will minimize the number of lamps required. These lamps do not consume as much energy as the incandescent bulbs and wouldn't cause a huge dent in your savings even if left switched on for longer durations. And because CFLs last longer, the replacement cost will also be much lower as the traditional bulbs would need to be replaced more frequently.

In the end, it's all about using the available resources more intelligently. The key to great savings lies not in switching the lights off but in switching to more energy efficient lighting solutions, if each individual commits to making more informed choices to lead a more energy-efficient lifestyle, it will not only result in huge personal savings but will also help the environment.

By Nirupam Sahay, Senior Director - Marketing, Philips Lighting India

A unique platform for health PPPs

The Bachat Lamp Yojana or BLY scheme provides a unique platform for a healthy public-private partnership between the Government of India, Private sector CFL suppliers and State level Electricity Distribution Companies (DISCOMs) and provides the framework to distribute high quality CFLs at about Rs.15 per piece to the households of the country. Under the scheme 60 Watt and 100 Watt incandescent lamps will be replaced with 11 to 15 Watt and 20-25 Watt CFLs respectively. BEE will undertake monitoring of each project area as required under an approved methodology of CDM. The replacement potential of ICLs with CFLs is also borne out of the fact that in the year 2008, ICL sales in India were 734 million whereas CFL sales were just 199 million. The penetration share of incandescent lamps for lighting in commercial and residential sector put together is nearly 80 per cent in India. The penetration of CFLs in households remains very low on account of the high price of the CFLs, which is 8-10 times the cost of incandescent bulbs.

BLY developed by the Bureau of Energy Efficiency (BEE) under the aegis of the Ministry of Power, is now registered under the Clean Development Mechanism (CDM) of the Kyoto Protocol, part of the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC is the centrepiece of global efforts to combat global warming. Developed to promote energy efficient lighting

in India, BLY promotes replacement of inefficient bulbs with Compact Fluorescent Lamps (CFLs) by leveraging the sale of Certified Emission Rights (CERs) under the CDM. The scheme was launched by the Union Minister of Power, Shri Sushilkumar Shinde, in February 2009.

Under the BLY scheme, quality CFLs would be distributed to grid-connected residential households in exchange of an incandescent lamp (ICL) and INR 15. Given the high transaction cost of preparation and registration of CDM projects and for wider reach and faster implementation, BEE has developed a Programme of Activities (PoA) which would serve as an umbrella CDM project. The individual projects, designed to be in conformance with the umbrella project, would be added to the umbrella project as and when they are prepared. The development of the PoA is a voluntary action on the part of BEE and it would not seek any commercial revenues from the PoA.

On the other hand, on behalf of Ministry of Power, Government of India, it will take the responsibility of monitoring all project areas after the DISCOMs and the CFL suppliers have entered into a tripartite agreement (TPA) with BEE. This is the largest PoA in terms of carbon dioxide emission reductions, to be ever registered by the CDM Executive Board.

BLY is a move towards promoting energy efficiency in India. It is the biggest

Programme of Activities of its kind in the world and provides a great opportunity for a robust public private partnership. BEE is only looking at reducing emissions by way of efficient use of electricity, but also at reducing the peak load in the country, which currently faces a shortage of up to 15 per cent. The replacement of all the 400m incandescent lamps (ICLs) by CFLs would lead to a potential reduction of over 6,000 MW in electricity demand.

The current penetration of CFL in the household sector remains low at about 5-10 per cent largely due to the high price of the CFLs, which is 8-10 times the cost of incandescent bulbs. BLY focuses on this first cost barrier to reduce the cost of CFLs to that of incandescent bulbs for consumers. At Rs 15 a piece for CFLs, the BLY is a win-win situation for all. Consumers will not only be able to save on their electricity bills but also help meet the energy efficiency targets of the country.

Domestic appliances and lighting sector accounts for almost 22 per cent of the total electricity demand in India, and contributes almost fully to the peak load as well. It is estimated that there are over 400 million light points in India lit with incandescent lamps. ICLs are extremely energy inefficient, with just 5 per cent of the electricity input converted to light. The remaining is lost as heat. In recent years the CFL has emerged as an energy efficient alternative, as a CFL uses only one-fifth as much electricity as

an ICL to provide the same amount of illumination.

India is a signatory to the UNFCCC and the Kyoto Protocol. While UNFCCC seeks to stabilize atmospheric concentration of greenhouse gases "at a level that would prevent dangerous anthropogenic (human-induced) interference with the climate system", the Kyoto Protocol, linked to the UNFCCC, was developed to meet the ultimate objective of the UNFCCC which is to "stabilize GHG concentrations in the atmosphere at a level that would prevent anthropogenic interference with the climate system", through quantified emission targets within a specified time frame. The Clean Development Mechanism under the Kyoto Protocol, allows emission reduction projects that assist in creating sustainable development in developing countries to generate "certified emission reductions" (CERs) for use by the investor.

The CDM process not only takes a long time but also has high transaction costs as a result of which it has not been very attractive for energy efficiency projects, which are usually small in terms of investments. The PoA reduces the transaction cost as the umbrella project registration allows smaller projects to be included without going through the entire process of due diligence. This enables the private investors to get CDM revenues in an expeditious manner. The registration paves the way for an accelerated implementation of the scheme.