

A Commercial Feature

Bachat Lamp Yojana

BLY: PROMOTING SAVINGS THROUGH EFFICIENCY

Bachat Lamp Yojana (BLY) is a scheme developed by the Bureau of Energy Efficiency (BEE) to promote energy efficient lighting. CFLs consume only 20-25 per cent of the energy used by incandescent lamp (ICL) to provide the same level of light.

However, the penetration of CFLs or Compact Fluorescent Lamps in 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.

Under this scheme, long-life quality CFL is distributed by investor to grid-connected residential households in exchange of ICL and Rs 15. Each household can get a maximum of 4 CFLs.

The BLY scheme has already been launched in 16 states of the country and latest addition to the list is the national capital territory of Delhi. The results from other states such as Kerala and Karnataka have been extremely encouraging. In Kerala, 1.3 million CFLs were distributed and approximately 1.1 million CFLs were distributed in Karnataka through the implementers.

CFLs distributed to a household under the scheme would have an average rated life of 6,000 hours and above. This scheme upon implementation would result in reducing an estimated 6,000MW of electricity generation capacity translating into a potential saving of Rs 24,000 crore annually.

Moreover, the combined greenhouse gas emission savings on replacing an estimated 400 ICLs with CFLs would result in reducing 20 million tonnes of CO₂ from grid connected power plants.

The majority of lighting needs of the households in the country is met by incandescent bulbs which are extremely energy inefficient as 95 per cent of the electricity is converted in heat and just 5 per cent is used for lighting. Lighting accounts for about 20 per cent of electricity consumption and has a significant potential for reduction of the load without compromising on the lumen output by use of energy efficient lighting in place of incandescent bulbs. CFLs provide that energy-efficient alternative to the incandescent lamp by using one-fifth as much electricity as an incandescent lamp to provide the same level of illumination. Government's efforts for promotion of CFLs are having the desired impact on the market with the sales of CFLs in India having grown from about 20 million in 2003 to around 200 million in 2008.

Launched in February 2009, BLY promotes replacement of inefficient bulbs with Compact Fluorescent Lamps (CFLs) by leveraging the sale of Certified Emission Rights (CERs) under the Clean Development Mechanism (CDM) of the Kyoto Protocol. The scheme provides a unique platform for a robust public private partnership between the Government of India, Private sector CFL suppliers and State level Electricity Distribution Companies (DISCOMs) and provides a framework to distribute high quality CFLs at about Rs 15 per piece to the households of the country. Under the scheme only 60 Watt and 100 Watt incandescent Lamps have to be replaced with 11W/15 Watt and 25-28 Watt CFLs respectively. BEE will undertake monitoring of each project area as required under an approved methodology of CDM. For this purpose, BEE has developed smart meters based on GSM technology that are fitted between the socket and the CFL in sample households (around 200 in each project area). The GSM based meter collects the data on hours of use and energy consumed by sending SMS to the central server.

Given the high transaction cost of preparation and registration of CDM projects and the fact that public sector in India do not possess adequate

(CPAs) in India through collaboration with Electricity Distribution Companies (DISCOMs). The scheme after implementation will result in reducing GHG emissions (CO₂) from power plants connected to the grid.

Under the BLY scheme quality long-life CFLs would be distributed by SSC-CPA implementer(s) to grid-connected residential households in exchange of an incandescent lamp (ICL) and Rs 15. Once the CFLs have reached their end of life or any CFLs which have failed prematurely during the project period, the SSC-CPA implementer(s) would arrange for the collection and disposal of CFLs as per applicable environmental norms.

To bridge the cost differential between the market price of the CFLs and the price at which they are distributed to households, the Clean Development Mechanism (CDM) is harnessed. The SSC-CPA implementer(s) would cover the project cost through sale of GHG emission reductions achieved in their respective CPA areas.

The Bachat Lamp Yojana PoA is a scheme developed by BEE to promote energy efficient lighting in India. There are no mandatory requirements in India requiring the use of energy efficient CFL at the household level. All the key players under the scheme like the BEE and participating implementer(s), DISCOMs and households are voluntarily taking part under this scheme.

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capacities to undertake them, BEE has developed a Programme of Activities (PoA) which would serve as an umbrella CDM project, once registered with the CDM Executive Board. 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.

largest PoA to be submitted to the CDM Executive Board by anyone in the world. Alongwith the PoA, BEE has also prepared model project documentation in accordance with requirements of the CDM to enable states and other private investors to take them up.

The BEE coordinates the Small-Scale Programme of Activities (SSC-PoA) and will support the project implementer(s) in implementing the CDM Programme Activities

'CFLs can reduce demand by 6000 Mw'

Bachat Lamp Yojana is a unique scheme to induce people to save energy without incurring a cost. Vandana Thakur, Assistant Energy Economist, BEE, speaks about the scheme and its benefits.

What was the purpose with which the "Bachat Lamp Yojana" was launched?

A surging demand has been observed in the Residential sector in India. The Domestic sector is consuming 25.87 percent of the electricity demand. The lighting load comprises of 28% of this electricity demand in the domestic sector and contributes almost fully to the peak load as well. The vast amount of lighting in the country is provided by incandescent bulbs (ICLs), which are highly energy inefficient. While using ICLs only about 5% of the electricity is converted into light, the rest is lost as heat. Since there are no mandatory requirements in India requiring the use of energy efficient Compact Fluorescent Lamps (CFLs) at the household level, the Bureau of Energy Efficiency (BEE) developed the "Bachat Lamp Yojana" (BLY) scheme to promote energy efficient lighting in India.

Under the BLY scheme quality CFLs would be distributed by Project Implementer(s) to grid-connected residential households in exchange of an incandescent lamp (ICL) and Rs 15. Once the CFLs have reached their end of life or any CFLs which have failed prematurely during the project period, the SSC-CPA implementer(s) would arrange for the collection and disposal of CFLs as per applicable environmental norms.

To bridge the cost differential between the market price of the CFLs and the price at which they are distributed to households, the Clean Development Mechanism (CDM) is harnessed. The SSC-CPA implementer(s) would cover the project cost through sale of GHG emission reductions achieved in their respective CPA areas.

How many states have been covered under BLY and what is plan going forward?

The BLY scheme has already been initiated in 16 states of the country. The results from other states such as Kerala and Karnataka have been extremely encouraging. In Kerala, approximately 1.3 million CFLs were distributed and approximately 1.4 million CFLs have been distributed in Karnataka through the Project Implementers. Delhi will start implementing the BLY scheme in a couple of months.

When will BLY plan cover the entire country?

The BLY umbrella framework was registered on 29th April, 2010. DISCOMs are being actively encouraged to implement across the country by the end of 2012.

What is the cost element involved in running this scheme?

The BLY scheme provides a unique platform for a healthy public-private partnership

between the Government of India, Private sector CFL suppliers and DISCOMs. To bridge the cost differential between the market price of the CFLs and the price at which they are distributed to households, the Clean Development Mechanism (CDM) is harnessed. The implementer(s) would cover the project cost through sale of GHG (Green House Gas) emission reductions achieved through the Clean Development Mechanism (CDM) in their respective project areas. 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.

What kind of potential energy savings is expected from the BLY?

It is expected that if all DISCOMs are able to initiate project implementation, the replacement of all the ICLs by CFLs in the domestic consumers would lead to a potential reduction of over 6,000 MW in electricity demand.

What kind of government support has this scheme received?

The Government has developed a programmatic approach (PoA) within which individual CFL supplier develops CDM projects. The Bureau of Energy Efficiency (BEE), being the statutory body set up under the Energy Conservation Act, 2001 by the Government of India acts as a managing and coordinating agency for all the BLY projects to be implemented in India and facilitate the implementation of the programme in various States through their respective Electricity Distribution Companies (DISCOMs) along with the CFL suppliers.

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HPL is the first private company registered 7 CPA with UNFCCC. HPL is saving an average of 50Gwhr per CPA per year for BESCOM. HPL will enable the various DISCOM to export electricity to other states after completion of project.

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