#### IFC/GEF Poland Efficient Lighting Project



**International Finance Corporation** 

CLOBAL Environment

Global Environment Facility PELP Short Term Impact CFL Subsidy Program

Admin & Marketing	\$1,200,000
Subsidies	\$2,613,682
Number of CFLs	1,218,888
Subsidy/CFL	\$2.14
Admin/CFL	\$0.98
Programme Cost/CFL	\$3.13
Retail Reduction/CFL	\$5.91

## Activities & Budget



### Objectives of the IFC/GEF Poland Efficient Lighting Project

- Reduce Polish greenhouse gas emissions through increased lighting efficiency
- Demonstrate effectiveness of private sector delivery mechanisms
- Accelerate development of energy efficient lighting market in Poland
- Promote energy efficient lighting as an inexpensive pollution prevention measure with major domestic and global environmental benefits.

## PELP DSM Pilot

### Distributed Utility Demonstration

- Participants are the cities of Elk, Chelmno and Zywiec, regional utility offices, and three manufacturers.
- Capacity constrained areas were targeted to see if it would be possible to avoid distribution system upgrades.
- Intensive marketing was used to achieve a penetration level of 5 CFLs per household in the target areas.
- After installing 12,536 CFLs in Chelmno peak power demand at some 0.4kV monitoring points declined 15%.

## Lessons Learned

- The PELP CFL Subsidy cost less than US\$ 25 per ton of avoided carbon equivalent emissions. A CFL promotion can be an efficient tool for CO<sub>2</sub> emission reduction.
- Energy efficiency programs can yield significant local and regional environmental benefits, and non-environmental benefits which help ensure success.
- Cooperative and collaborative partnerships between private firms, NGOs and the public sector agencies can yield important benefits in program effectiveness.
- The PELP template appears to be broadly replicable in a range of other countries.

# PELP Leveraging of GEF Funding

- Average subsidy of US\$ 2.14 per unit resulted in an average induced Consumer investment of around US\$ 10 per CFL.
- US\$ 40 M (725 GWh) in consumer electric bill savings; 206,000 tons of carbon equivalent emissions avoided over life of CFLs
- CFL market size increased to ca. 1.6 M units in 1996 (was 0.6 M in 1994)

## PELP - Financial Leverage

+ GEF Wholesale Subsidy
+ Manufacturers' contribution
+ Avoided retail markup
= Total retail price reduction
on 1.21 million CFLs purchased
Every \$1 of GEF wholesale subsidy led to a \$2.80 retail price decrease.





## **PELP** Public Education

- Advertising in media
  - → (1) 95/96 TV 15'' spot : 1.5 M viewers
  - $\rightarrow$  (2) 96/97 printed media: 2.3 M readers
- Environmental education program in Polish schools
- Press conferences, seminars and newspaper articles

# PELP CFL Subsidy

- Two promotional campaigns during the winters of 95/96 and 96/97
- Country-wide program approach
- Five participating Polish CFL manufacturers
- 1.2 million CFLs directly subsidized
- Increased sales of non-subsidized CFLs

## Lessons Learned

- Commercial interests of private sector partners effectively augments the market transformation effects of the program.
- Private sector delivery mechanisms allows rapid and flexible implementation and a high level of cost effectiveness.
- The private sector approach allows incorporation of competitive mechanisms and performance criteria into program administration which helps further optimize program delivery efficiency.

Examples of the PELP Impact on CFL Market Transformation

- 20% increase of Polish adults' awareness of CFLs
- 50% of purchasers in the 95/96 lighting season learned about CFLs from PELP
- The number of Polish households possessing CFLs increased from 11% to 19%
- 99% of purchasers satisfied
- + 80% of purchasers intend to buy CFLs again