



# Global Environment Facility

**Leonard Good**

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November 22, 2004

Dear Council Member:

The World Bank as the Implementing Agency for the IFC-executed project entitled "Energy Efficient Lighting Initiative (ELI)" has submitted the attached proposal regarding a revision to this project.

The amendment involves the creation of a stage to the project which can best be described as an ELI Legacy Stage. According to the proposal, the amendment will involve extending the project duration for two years and increasing the funding allocated to the project by \$1.07m. This additional incremental cost funding and the remaining funding (\$370,000) from the earlier approved project will then be used to strengthen the capacity of the China Certification Center for Energy Conservation Products (CECP), enabling them to serve on a sustainable basis as the ELI Quality Certification Center. In this way, IFC hopes to make the ELI logo a permanent brand name and logo in the mass market for efficient, high quality compact fluorescent lighting.

We consider these changes to be major amendments to the original project document originally endorsed in April 1999 and revised with a second tranche endorsement in January 2000. We fully expect this to be the final revision or amendment to this project. In keeping with the GEF procedures, the Secretariat is reviewing these proposed changes with a view to ascertaining their appropriateness in light of the project's objectives.

If by December 22, 2004, I have not received requests from at least four Council Members to have the proposed project reviewed at a Council meeting because in the Member's view the project is not consistent with the Instrument or GEF policies and procedures, I will complete the Secretariat's assessment with a view to endorsing the proposed project document.

Sincerely,

# OFFICE MEMORANDUM

DATE: November 11, 2004

TO: Mr. Leonard Good, Chief Executive Officer and Chairman, GEF

FROM: Steve Gorman, GEF Executive Coordinator, The World Bank



EXTENSION: 35865

SUBJECT: **IFC/GEF Efficient Lighting Initiative (ELI);**  
**Request for Approval to Support The ELI Quality Certification Institute:**  
**Sustainably Certifying the Quality of Efficient Lighting**

## Executive Summary

This memorandum requests CEO approval for amendments to the IFC/GEF Efficient Lighting Initiative (ELI), a \$15 million, four-year global program which has promoted the accelerated use of more efficient lighting technologies in seven participating countries. The amendments would extend the program for two years and authorize an additional \$1.07 million from the GEF and the reallocation of approximately \$370,000 in GEF funds to maintain the value of a certification process and logo created by the Initiative. The objective is to achieve a commercially self-sustaining certification process supported by fees paid by participating manufacturers. The need for this activity was identified by independent reviews of the program, which recognized the detrimental impact of cheap but low quality lighting products on consumer acceptance of efficient lighting products. The alternative is to retire the logo (in order to assure it is not used inappropriately to mislead consumers) and risk “market poisoning” due to the penetration of low quality products.



ELI achieved its goal of a measurable advancement of the efficient lighting market in seven developing countries during its four-year life. As documented by an independent evaluation, the Initiative lowered prices, increased consumer demand, expanded product availability, and improved the quality of energy efficient lighting in the countries where it operated. In implementing ELI, IFC deployed a toolkit of market intervention strategies which were adapted to the market conditions of each of the seven countries. The country strategies were adapted to changing market conditions in order to accelerate development of the market for energy efficient lighting products and services in each country. Implementation of ELI was completed at the end of 2003.<sup>1</sup>

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<sup>1</sup> The ELI Process and Impact Evaluation Study is in draft form (a preliminary draft is attached). The ELI Market Transformation Study, which focuses on the sustained impact that the program has had on the seven ELI country markets, will be available in mid 2005.

IFC supported the seven local ELI country programs at the global level through the development and administration of the ELI quality certification program, anchored by the ELI quality mark, shown above. This quality assurance tool was a central element of ELI's success in leveraging parallel investment by the lighting industry in efficient lighting market development, and was the core of the consumer education strategy of the global program. The ELI quality mark has gained worldwide recognition among manufacturers and consumers as a mark of high-quality efficient lighting. As it was developed with GEF funding, the logo is an asset that belongs to the GEF. Based upon the broad uptake of the ELI quality certification process in the global lighting industry, and the value created during the program both within and beyond the ELI countries for the ELI certification process, IFC began (over the last two years of implementation) a process of establishing a business enterprise which could sustain the ELI quality certification process without additional donor resources upon the close of the program.

The first step was a global procurement process during which IFC solicited proposals from institutions with the capability and interest in maintaining the certification process. The China Certification Center for Energy Conservation Product was selected as the most qualified bidder and began working with the IFC to prepare a business plan that would allow the ELI logo and certification process to be maintained indefinitely through fees paid by manufacturers. Operating as the proposed ELI Quality Certification Institute, the quality mark and certification process would continue to stimulate demand for, and supply of, high-quality efficient lighting products in developing countries. The alternative would be to simply retire the ELI logo and risk "market poisoning" due to the penetration of low quality products.

The total cost for the establishment and initial operation of the ELI Quality Certification Institute is \$1.44 million. IFC proposes to re-allocate approximately \$370,000 from un-disbursed ELI funds for this purpose and seeks GEF CEO endorsement of an additional \$1,070,000 for this project.

**The ELI Legacy program is intended to sustain the ELI quality certification operations on commercial terms. The initiative represents an effort to build on the value created in the market place for the ELI logo, and responds to the guidance of the GEF Secretariat during ELI's development and implementation, and reiterated by the independent ELI program evaluators, regarding the importance to the global market of sustaining the ELI quality certification process. The funds would provide seed funding for implementing the self-sustaining ELI Quality Certification Institute's business plan (to be executed by CECP under the attached business plan.) As such, the disbursements would be completed, subject to a schedule of milestones to be achieved by the Institute, over two years, and the ELI Trust Fund closed upon final disbursement. The GEF seed money would function as equity for the Institute, and the ownership of the quality mark and certification process would convey to the Institute upon full disbursement of the GEF funds.**

### ***Background: Building upon ELI's legacy***

The IFC/GEF Efficient Lighting Initiative (ELI) was a \$15 million project to reduce greenhouse gas emissions by increasing the penetration of efficient lighting products in seven markets: Argentina, the Czech Republic, Hungary, Latvia, Peru, the Philippines, and South Africa. From its four years of operation (2000 -2003), ELI leaves behind three main legacies.

First, ELI achieved significant and sustainable market penetration of efficient lighting technologies (this was ELI's primary focus). The ELI Process and Impact Evaluation Study, undertaken through the comprehensive four-year evaluation program that operated integrally with the program implementation, details these impacts. The review draft of the report is attached in the interim (Annex A). Among the examples of ELI's impact is the market in Peru, where sales of compact fluorescent lamps (CFLs) have increased by 500% since the start of ELI. In South Africa, sales of CFLs increased by 64%, while – most remarkably -- sales of standard (incandescent) lamps *decreased* by 9%. Similar results were registered across the ELI countries.

Second, ELI has built local capacity among agents of change, such as manufacturers, businesses, government institutions, utilities, banks, and NGOs, to continue the promotion of efficient lighting beyond the close of the program: for example, through partnerships with ELI, electric utilities are now analyzing or implementing energy-efficient lighting DSM programs for their customers. These include Edesur (Argentina), Edelnor (Peru), ESKOM (South Africa), and CEPALCO (Philippines). Two additional utilities have established CFL leasing programs in Argentina – working with the ELI executing agent Edesur – since the official close of ELI country operations in late 2003..

ELI's third legacy, which is the subject of this proposal, is the ELI "Green Leaf" quality mark and product quality certification system: this logo has gained worldwide recognition among manufacturers and consumers as a mark of high-quality efficient lighting.

### ***The ELI Quality Mark and Product Quality Certification System: An asset that stimulates demand for, and supply of, high-quality efficient lighting products***

At the start of ELI, IFC's market research showed that markets for efficient lighting were threatened by the existence of low-quality products, whose poor performance might give efficient lighting a bad reputation. In response, IFC created a quality certification component for ELI, built around the Green Leaf quality mark. Manufacturers whose products met ELI's quality criteria were allowed to display the quality mark on packaging and advertising. ELI built credibility for the logo via random testing of certified products. The Lighting and Appliance Testing Laboratory of the Philippines Department of Energy (which ELI supported in upgrading their equipment and in receiving international certification) conducted the random testing. ELI retained engineers in the Philippines and Thailand to analyze the testing results. ELI negotiated with manufacturers to remove poorly performing products from the market, and publicized the results of these evaluations. Some manufacturers responded by introducing better performing products.

The ELI quality mark gained wide recognition, with impact and uptake well beyond the seven ELI countries. Over the life of the program ELI engaged with some 55 manufacturers, and certified over 200 products. Manufacturers even modified certain products in order to enable them to qualify for the ELI quality mark.

On a global level, marketers of lighting products turned to ELI as a resource for selecting high quality, reliable products. Although ELI's promotional campaigns were only conducted in the seven named countries, key market players in many other developing countries also accessed and benefited from ELI's public information. For example, ELI and the IFC team received inquiries about setting up new energy-efficiency programs from Ecuador, Vietnam, India, Thailand and Ghana. Vietnam adapted ELI's CFL specifications for its own government-sponsored program. A lighting distributor from Jamaica is using ELI's technical information to select and evaluate products. By maintaining and updating technical information, specifications, program resources, and lists of evaluated products, ELI serves as an important resource in the energy efficiency sector.

The logo was developed originally for use in the IFC/GEF Poland Efficient Lighting Project (PELP), and was subsequently adopted in ELI. As it was developed with GEF funds, the logo is an intellectual property asset belonging to the GEF. The value of this asset lies in its role as a tool that stimulates demand for, and supply of, high-quality efficient lighting products.

### ***Development of the Strategy for Building on the Quality Mark's Momentum***

During ELI's final year of operations, IFC assessed the impact and value of the ELI quality mark. In discussions with key players in the lighting industry and with managers of regional and national lighting initiatives who had come to rely upon the ELI standards, IFC sought to answer the question: "would the quality mark need to be recalled from manufacturers' use once the program operations ceased to be supported by GEF funds, or might there be sufficient value established to provide the basis for sustaining the logo?"

The assessment concluded that ELI had created considerable value for the quality mark in ELI countries, identified several instances of the ELI performance specification and quality mark being adopted beyond the ELI country markets, and found an apparent willingness among manufacturers of quality products to support the mark's continued existence. (See *Annex A: Review draft of ELI Impact Assessment, and Annex B: Letter from ELI's Independent M&E Contractor commenting on the ELI Quality Certification Institute* ). Therefore, IFC embarked on developing a plan to sustain the ELI quality mark in developing country markets, beyond the life of ELI.

### ***Why the Global Lighting Market Situation Makes China Certification Center for Energy Conservation Products (CECP) an Elegant Choice as the future ELI Implementer***

Over the past decade, a remarkable shift has occurred in the manufacturing of lamp products. Not only the three major lamp companies but also scores of smaller lamp companies worldwide have either set up directly-owned factories in China, or, contracted

with Chinese electronic factories to create products to their specification. In 1990 a lamp made in China was not likely to be of high quality. Today, however, the best quality lamps can and are being manufactured in China, due to the introduction of strict quality control processes by international corporations, and due to the increased global market awareness of Chinese manufacturers and government. Even as low quality producers continue to generate great volumes of unreliable product, a substantial capacity for producing the highest quality products in the world now exists in China. Overall, China now produces nearly 85% of the world's compact fluorescent lamps, and is steadily gaining more orders for other types of efficient lighting products, including important emerging technologies such as light emitting diodes.

Beginning in 2002, IFC conducted a global search to identify an organization with the vision and demonstrated capacity to create an international, financially viable service-based enterprise around the ELI logo and the quality certification that it represents. Through a comprehensive international bid process in which eight institutions provided proposals, IFC selected the China Certification Center for Energy Conservation Products (CECP) in Beijing, China. CECP's experience in on-site factory inspection and the reputation of its director as an ISO-certified evaluator offered a compelling value to ELI. Virtually all countries "shop" for lighting in China. Even manufacturers with headquarters located outside of China typically travel to China to procure components or to place manufacturing orders. Locating the ELI Quality Certification Institute at CECP offers the unique opportunity to efficiently administer a global quality mark for exported products. Toward this end, IFC has been working with CECP over the past year to prepare a business plan for the ELI Quality Certification Institute (attached as Annex C).

Unique among the eight global organizations whose proposals IFC considered, CECP has demonstrated the ability to generate revenues from manufacturer fees for quality certification of other consumer products, and has developed technical assessment tools that are adaptable to lighting technology. As the executor of the UNDP/GEF China Green Lights quality certification process, CECP already certifies efficient lighting products for the China domestic market, thus its proposed new role would provide an opportunity for a "one-stop shop" for manufacturers seeking access to both the China domestic and international developing country markets. In IFC's experience, this is an essential characteristic for enabling broad acceptance and participation by manufacturers – lowering transaction costs, and thus barriers to manufacturer uptake.

The addition of the ELI label for export products to the CECP portfolio presents an elegant complement to its current work, and enables efficient one-stop certification for global manufacturers seeking access to developing country markets. It represents a unique collaboration across regions for two landmark GEF projects (Green Lights and ELI). By locating the administration of the ELI Quality Certification Institute in China, IFC believes that lighting manufacturer participation will increase significantly, and that more types of lighting products would be made available with the ELI label.

Placing ELI within CECP provides the opportunity to leverage international cooperation for harmonization of lighting standards. The ELI quality performance specifications have emerged as the standard for aggressive new minimum efficiency standards being developed and adopted by regulatory agencies in several regions (most recently in Vietnam). This is an enduring legacy for the program, and one that brings long-term

energy and environmental benefits to developing countries. China is aggressively instituting stringent minimum efficiency standards for lighting. (Interestingly, China's Green Lights lighting product standards are more stringent than similar ones in the United States.) CECP plays a pivotal role in developing such standards, and is in a favorable position to influence harmonization and establishment of minimum standards. CECP presently is engaged in the technical aspects of the China Green Lights Program and is cooperating with the United States ENERGY STAR programs. CECP is also active in harmonization discussions with ASEAN, and ELI has been active in the EU CFL Quality Charter process.

In executing the ELI legacy's Quality Certification Institute, CECP will work through a network of global partners to make accessible to industry members and program operators participation in the ELI certification and efficient lighting promotion activities beyond China. Specifically, ELI has established on-going partnerships in Argentina (IRAM), South Africa (ESKOM), Peru (ASPEC), India (IEEC), Philippines (PLIA, LATL), and across Asia (ASEAN, CLASP), each of which will continue to play a partnership role as marketing arms of the ELI Legacy. Toward this end, the CECP business plan includes specific provisions to support marketing arms in Latin America and Asia, and ELI has provided seed funding to support on-going legacy activities in several ELI countries in order to ensure continuity to the Legacy activities and a continued global focus for ELI and a level-playing field for efficient lighting manufacturers globally.

### ***Proposal***

IFC seeks GEF approval to use the approximately \$370,000 in un-disbursed ELI funds and CEO endorsement of an additional \$1,070,000 to implement a business plan for establishing a sustainable quality certification facility for efficient lighting, called the ELI Quality Certification Institute. The proposed Institute is necessary in order to sustain availability (on an expanded global scale) of the ELI product quality assurance system which has been instrumental in supporting development of the efficient lighting market during the program's life. The ELI certification program was a key ELI outcome, as described in this memo and in more detail in the ELI program evaluation study. The continued use of the logo is also important for achieving the objectives of a recently approved GEF UNDP project on efficient lighting in the Philippines, and is linked to a GEF UNDP efficient lighting project in China concurrently supported by the same Chinese organization where the ELI Certification Institute would be based. The funds will be disbursed over a two year period, concurrent with CECP reaching a series of milestones (articulated in the Business Plan), after which time CECP will take full ownership of the logo and certification process. The final disbursement would function as equity for the Institute, the use of such funds under the full control of CECP, and the ELI Trust Fund would be closed at that time.

Using the original GEF ELI program grant funding, ELI had developed and provided quality certification services free of charge as key elements of its market transformation strategy. The business plan for the ELI Quality Certification Institute introduces a fee-based revenue model to sustain these services in the future and expand their reach to other developing country markets.

The ELI Quality Certification Institute would be a win-win-win proposition for developing country lighting programs, for manufacturers seeking aggregated markets for efficient products, and for end-users who need reliable, efficient and cost-effective source of lighting. ELI has established and would continue to help develop a technical infrastructure of local experts, testing facilities and local language access to information about efficient lighting products which plays an important role in the development of a sustainable market for energy efficient lighting.

*The alternative to the proposed ELI Legacy initiative* would be to simply retire the logo, removing it from the 200 products which currently wear the ELI Green Leaf, and ceasing support for expanding the specification to new technologies (such as solid-state lighting/LEDs) and the various private and public sector market development efforts to which ELI has given rise. In this case ELI would cease to be a productive asset supporting the global market for efficient lighting.

### ***A Window of Opportunity***

Building on the seven coordinated country programs, ELI has built several resources that could continue to offer high value for developing countries on a global level. These include

- An internationally recognized voluntary product labeling process in which the major and some minor lamp manufacturers participate;
- A set of technical specifications and a random testing process that ensure delivery of savings and quality to end-users in developing countries; and
- A centralized information source that offers program design, evaluation, technical and field implementation resources to program implementors globally;
- Consumer recognition and awareness of the ELI logo in the seven ELI countries and a network of ELI collaborators who will continue to market and support the program through their own self-sustaining legacy activities;
- Visibility and credibility established across the global lighting industry for the ELI certification process, including both the major and many minor manufacturers.

### ***A Business Plan for Sustaining the ELI Quality Mark***

The objectives of the Business Plan for the ELI Quality Certification Institute are to:

- a) Promote ELI specifications as world-class energy efficiency performance targets to manufacturers, to encourage them to offer more high efficiency lighting products.
- b) Provide objective information to market aggregators, buyers and advocates so that they can easily differentiate efficient, high quality lighting products from inefficient and poor quality ones.
- c) Accelerate the widespread adoption of energy efficient lighting products and thereby reduce greenhouse gas (GHG) emissions.

d) Keep ELI as a self-sustaining product certification scheme in at least two regions that have many developing countries (Asia and South America). Continue to grow ELI's presence in Africa. Demonstrate to manufacturers and retailers the value of the ELI quality mark in these regions by expanding use of the ELI specifications and reliance on the list of ELI certified products by market aggregators, including lighting programs, utilities, large retailers, and other bulk purchasers. *The Institute will focus beyond the Chinese market and support international manufacturers – not just Chinese manufacturers.*

e) Seek opportunities to introduce the ELI quality mark in developing countries where no other energy efficiency quality mark exists and where one or more local organizations express a strong interest in promoting efficient lighting.

While CECP is China-based, the Certification Institute would be implemented through a network of collaborators in Asia, Latin America, and eventually Africa. The focus of the Institute is international – targeting non-Chinese markets through a network of marketing partners, building on the partnerships already established in the seven ELI countries (including the testing laboratory in the Philippines), and supporting global manufacturers internationally, including key manufacturing centers elsewhere in Asia and Europe, and smaller producers in Latin America and elsewhere.

Excerpted below is the projected budget for the ELI Quality Certification Institute. IFC plans to fully disburse CECP's requested funds during the first two years of Institute operations. CECP already has established a foreign currency account for international programs and has instituted auditable accounting practices. The complete Business Plan is available in Annex C: Business Plan for The Efficient Lighting Initiative 2004 to 2010.

The business plan assumes that CECP will supplement its fee-based revenues with additional revenues from cooperative agreements with other lighting programs and with donor grants related to its work with lighting programs globally. CECP's current complementary activities with donor programs and institutions position the organization for success in this regard.

IFC will continue to supervise the project during the two-year disbursement period, and will transfer intellectual property assets (such as the ELI quality mark) to CECP at the end of that period, upon realization of the milestones defined in the business plan. During this growth phase, CECP and IFC may agree to establish the ELI Quality Certification Institute as a wholly independent entity, or it may continue as a distinct activity of CECP. IFC's supervision and investment in ELI will cease in 2007, when the GEF funds are fully disbursed, and IFC determines that the ELI Quality Certification Institute is on the road to financial sustainability. .

**Table 1. Projected IFC Funds Budget for ELI, 2005 to 2007 (US\$)**

Fiscal year	2005	2006	2007	Total 2005 to 2007
CECP disbursements	500,000	640,000	0	1,140,000

<b>International tech advisors &amp; transition team</b>	90,000	90,000	20,000	200,000
<b>IFC Supervision</b>	40,000	40,000	20,000	100,000
<b>Total IFC/GEF Funds</b>	630,000	770,000	40,000	1,440,000

This projected budget assumes that IFC shall disburse \$1.14 million by the end of two years of operations for the Institute, but that the funds will remain available to CECP as operating capital or other uses pursuant to the execution of the business plan for the Institute beyond that time. Thus, the milestone-driven disbursements will serve as equity for the Institute upon disbursal.

IFC will provide supervision and technical support to CECP throughout the life of the project extension, during which time all functions of ELI will be fully administered by CECP. The IFC supervision and technical support team will play a substantial role during the two year transition period to CECP's full independence as owners and operators of the Quality Certification Institute. The IFC-administered transition activities will enable IFC to ensure continuity from the initial phase of ELI, including integration of lessons learned and transfer of technical expertise, and provide fiscal prudence and administrative oversight in the establishment of the Institute. The effective execution of this role requires IFC to directly engage (rather than through CECP) a core team of consultants and partner organizations who were central to ELI's implementation of quality certification and random testing, and the administration, global outreach, and website management of the program. IFC will therefore engage a team of technical consultants who were involved in the execution of ELI, in order to transfer the knowledge and capacity to CECP and ensure a successful handoff of the ELI operations and partner relationships. IFC's supervision fees are included in the proposed budget.

The sustainability plan for the Certification Institute relies initially on the GEF funds to provide seed funding in the form of equity contributions that would be disbursed by IFC over two years, consistent with a schedule of milestones. The final disbursal would be managed independently by CECP, consistent with the terms of disbursal as defined by the business plan. Table 2, below, illustrates the projected sustainability budget, including the gradual use over several years of the final disbursal made as an equity contribution for working capital purposes after two years.

**Table 2. Projected CECP Revenues for ELI Certif. Instit., 2004 to 2010 (US\$)**

<b>Phase</b>	<b>Transition</b>		<b>Growth</b>		<b>Stability</b>			<b>Total</b>
<b>Fiscal year</b>	2004	2005	2006	2007	2008	2009	2010	2004 to 2010
<b>GEF/IFC funds</b>	200,000	300,000	250,000	180,000	150,000	50,000	50,000	1,140,000
<b>Certification fees</b>	0	30,000	60,000	80,000	130,000	150,000	150,000	600,000
<b>Total annual</b>	200,000	330,000	310,000	260,000	240,000	200,000	200,000	1,700,000

International donor grants and CECP in-kind co-funding are not included in this projection. Grants would be used to supplement the above revenues and expand the outreach of ELI to more developing countries, as targeted by the grantors and CECP.

List of Annexes:

Annex A: Review draft of ELI Monitoring and Evaluation Report.

Annex B: Letter from ELI's Independent M&E Contractor commenting on the ELI Quality Certification Institute

Annex C: Business Plan for The Efficient Lighting Initiative [ELI Quality Certification Institute] 2004 to 2010

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