

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC3620

Project Name	Large Enterprises Energy Efficiency Proj (P148620)
Region	EAST ASIA AND PACIFIC
Country	Indonesia
Sector(s)	General energy sector (100%)
Theme(s)	Climate change (100%)
Lending Instrument	Investment Project Financing
Project ID	P148620
GEF Focal Area	Climate change
Borrower(s)	Ministry of Industry
Implementing Agency	Ministry of Industry
Environmental Category	B-Partial Assessment
Date PID Prepared/ Updated	02-May-2014
Date PID Approved/ Disclosed	23-Jun-2014
Estimated Date of Appraisal Completion	31-Oct-2014
Estimated Date of Board Approval	16-Dec-2014
Concept Review Decision	Track I - The review did authorize the preparation to continue

I. Introduction and Context

Country Context

In Indonesia, modern energy use is the second largest source of GHG emissions after forestry/land use change. GHG emissions from fossil fuel consumption were 426 million metric tonnes of carbon dioxide equivalent (MtCO_{2e}) in 2011. The rapid growth in emissions from fossil fuel use results from increasing energy demand compounded by high electricity subsidies. The electricity demand growth rate is forecasted to range between 7.6% and 9.6% per annum through 2021 (2012-21 RUPTL). Fossil fuels dominate energy consumption and the use of coal is set to further increase as Indonesia is implementing a 10,000 MW investment program, which is based entirely on sub-critical coal fired plants.

The Government of Indonesia, represented by various ministries (i.e. Industry, Energy and Mineral Resources, Finance, Environment, and Research and Technology) has made political commitments to realize much of the vast energy efficiency (EE) potential within the country, and see this project

as instrumental in helping them to achieve their stated goals. The Energy Law enacted in 2007 provides a framework to promote EE throughout the economy, including the state-owned enterprises sector. However, translating these laws and procedures into on-the-ground results has proven to be difficult. The Government is therefore keen to provide oversight and policy support to catalyze the EE financing market.

Sectoral and Institutional Context

Energy supply security in Indonesia is at risk due to rapid growth in demand. In the main population centers of Java, annual growth in peak electricity demand is around 10%. The outlook for the Indonesian economy foresees continued increase in domestic demand, energy consumption and investment. In order to ensure supply stability it is critical for Indonesia to increase energy supply, and to enhance demand side EE improvements. In the National Energy Policy (Presidential Regulation No.5/2006) four main themes for EE are outlined: diversification of energy sources, energy conservation, rationalization of energy prices, and environmental protection, which targets a reduction in carbon emissions by between 26% and 41% by 2020.

Mitigating the impacts of climate change is a policy and a commitment of the government. As a large contributor to global GHG emissions, the Indonesian Government is actively engaging in low carbon development. The Low Carbon Development Options Study, commissioned by the GoI and funded by donor agencies with technical inputs from the World Bank, identified energy efficiency in the manufacturing sectors as having the greatest potential to meet emissions reduction goals.

The manufacturing sector in Indonesia, especially the large enterprises sector, is in need of upgrading and modernization and is one of the nation's largest contributors to fossil fuel based greenhouse gas emissions, accounting for 40 % of the country's fossil fuel emissions. Much of the industrial plant is ageing and a distinct absence of energy efficiency (EE) focus means that even low-cost measures may not have been implemented except in a few select sectors, e.g. cement. As a result, significant potential for energy efficiency improvements through plant modernization exists. An AusAID funded World Bank study established a potential pipeline of 12 EE projects with favorable payback periods and an investment need of about US\$1.2 billion. However the pipeline would need considerable project development support over a sustained period to develop prospects to the point where commitment for investment could be made. Furthermore, in some cases it was judged that industries may need additional incentives, such as improved borrowing terms, to undertake EE financing.

Presidential Regulation 70/2009 mandates large energy users to employ energy managers and report on energy use and industries that consume more than 6,000 toe must undergo an energy audit and are provided funding on favorable terms for follow-up investment lending. In addition, mandatory emissions reductions targets have been introduced for the cement sector and the Ministry of Industry (MoI) is now planning to introduce similar targets for other industries.

However, significant barriers exist in the Indonesian market, which prevent this commercial lending from taking place. For large industries the key barriers include:

- Low priority and lack of motivation for EE investments among large manufacturing industries. Industry owners are generally unaware of the opportunities, costs and benefits of EE improvements, despite recent Government measures.
- Lack of knowledge among banks about EE opportunities, project performance and risks.

Indonesian banks have insufficient experience in assessing EE opportunities and project benefits, assessing technical and repayment risks, and verifying EE savings estimates.

- Limited institutional capacity in the market to identify and prepare bankable EE projects. There are no intermediaries to help lenders and borrowers spot EE opportunities and include them in plant rehabilitation and expansion projects, or to generate a pipeline of bankable investment projects.
- Limited impact of the existing EE policy incentives. Present policy is not conducive for a transformational impact in growing the EE financing market. It is not clear how many industries fall under the provisions of Regulation 70/2009 and most branches of industry have neither mandatory nor voluntary efficiency improvement targets.

Low electricity prices are not a main barrier for EE in large industries because (i) even at existing subsidized electricity prices pay-back periods on many EE projects are low bringing them in the range of financially viable investment opportunities; and (ii) many plants use coal, oil and gas as the main energy inputs – and for these fuels prices are now close to market level. Electricity prices for industry are also proposed to increase by between 39 to 65 percent based on consumption category from May 2014 onwards.

The presence of the above mentioned barriers has caused a low uptake of existing IFI energy efficiency credit lines at local banks. AFD has a US\$ 100 million facility with Bank Mandiri, ADB has a US\$ 30 million facility with Indonesia EXIM Bank, and IFC has unused CTF funds which could potentially be used for EE investments. Furthermore, BNI refused to accept the third tranche of a KfW SME EE loan citing low margins and the time required to prepare small projects thereby leading to an inefficient use of the bank's human resources. In addition, existing IFI credit lines have not included a strong enough market development aspect leading to low market uptake, slow disbursement, and waning interest among industry and financial institutions. Other factors that have influenced the low credit uptake for industrial EE include lack of capacity or understanding of EE projects, and the lack of motivation for venturing outside the standardized large deal sized lending by loan officers. The market also lacks the presence of a strong technical/financial advisory institution with the capacity to deliver a pipeline of bankable EE investment projects.

Given these realities, it is proposed to implement a stand-alone GEF funded grant to support EE investments by raising awareness among industrial decision makers and financial institutions, developing a pipeline of investment-ready large industrial EE projects and bringing these projects to financial close.

Relationship to CAS

The WBG has an important engagement to support the Government of Indonesia's efforts to improve power systems infrastructure to meet demand, enhance reliability and quality, scale up renewable energy and natural gas, increase access to modern energy, and improve energy efficiency. The project supports the Government's agenda to improve energy security through energy conservation by strengthening the enabling environment for financing energy efficiency in Indonesia's industries.

II. Proposed Development Objective(s)

Proposed Global Environmental Objective(s) (From PCN)

The development objective of this activity is to strengthen the enabling environment for the

development of energy efficiency investments in large industrial enterprises in Indonesia.

The strengthening of the enabling environment, supported by the GEF grant, is expected to incentivize local banks to undertake EE financing in the large enterprises sector resulting in significant energy savings.

Key Results (From PCN)

The project will support the establishment of viable financing and implementation models for the large industrial enterprises sector which can be tested, and refined based on early implementation experiences, and subsequently be scaled-up and institutionalized with purely commercial financing.

The project aims to develop a pipeline of projects that can be financed by commercial banks either using own funds, IFI credit lines or targeted financing (e.g. from IFC).

The project also aims to create an enabling investment environment by contributing towards and leveraging off other donors' programs for the formulation of a streamlined EE policy.

The key results indicators will be:

- Investment mobilized for EE projects (US\$ million)
- Projected energy savings (toe, GJ, MWh) and emission reductions (CO2 equivalent tons/year)

III. Preliminary Description

Concept Description

Component 1: Project development. Total cost: US\$ 5.25 million of which GEF US\$ 4 million, MoI US\$ 1.25 million as follows:

A. Project development, project appraisal and monitoring. [GEF US\$ 2 million] Under this sub-component, a pipeline of EE investment projects will be prepared to be financed from existing credit lines and, potentially through co-financing by IFC. A specific target under this project will be to develop the energy efficiency lending activities of two or three participating banks. The participating banks will be selected according to the following eligibility criteria: (i) portfolio of industrial clients; (ii) ability to work with existing or planned IFI credit lines; and (iii) meeting Bank criteria for FIs. Focus will be on 10-15 very creditworthy large industries, both state owned and private. Focusing on very creditworthy industries would increase the prospects of coming to financial close. This would then yield valuable case studies for the dissemination part.

Activities to be undertaken are expected to include:

- (i) pipeline development support for project developers/industries and financiers – including the selection of and building institutional capacity in a strong technical/financial advisory services entity responsible for generating a pipeline of bankable EE projects;
- (ii) the development of special EE financing products or schemes;
- (iii) developing enhanced systems for monitoring energy savings after the projects have been financed and implemented; and
- (iv) training.

B. Transaction advisory services. [Total cost: US\$3.25 million, of which GEF US\$2 million; MoI US\$1.25 million] Under this sub-component, the project will support:

- (i) preparation of a Project Operations Manual for participating banks that would include sub-project selection criteria, a list of eligible sectors, project types and sizes, energy savings requirements, safeguards risk assessment and management guidelines and requirements, and monitoring and reporting requirements; and
- (ii) provide transaction advisory services from subproject identification through financial close - experiences gained under this sub-component will allow the participating banks to continue financing EE projects after the IFI loan funds are fully disbursed.

Component 2: Awareness and Capacity Building. Total cost: US\$2.47 million; of which GEF US\$1.22 million, MoI US\$1.25 million as follows:

A. Awareness Building and Knowledge Exchange. [Total cost: US\$1.75 million, of which GEF US\$0.75 million, MoI US\$1.0 million] This sub-component will support:

- (i) awareness building, training, and information dissemination to key market players on the opportunities for EE and successful implementation schemes through existing IFI credit lines which would be shared and disseminated widely to demonstrate the viability of EE lending;
- (ii) market studies, assessments and options papers for future investment programs beyond the state-owned enterprise market; and
- (iii) participation in stakeholder dialogue during roundtables and other fora to discuss various policy and market issues to develop recommendations to scale-up investments in the sector.

B. Capacity Building within MoI and MEMR. [Total cost: US\$0.72 million, GEF US\$0.47 million, MoI US\$0.25 million] This sub-component will support:

- (i) dialogue with donor partners conducting review of ongoing EE primary and supplemental policies to identify deficiencies and discuss options for their resolution with a focus on the large enterprises sector;
- (ii) review of incentive programs recommended by donor partners, and offered by the Government to improve utilization and impacts for EE market development;
- (iii) design and launch of an energy/EE indicator function and database within MoI and MEMR covering all sectors;
- (iv) identification and assessment of other potential policies with high impact potential, such as government green/EE procurement, minimum energy performance standards, green award, tax exemptions, etc. and develop program plans; and
- (v) staff training.

Component 3: Project Management: Total cost: GEF US\$ 0.26 million

This component will finance consultants to support project implementation including procurement, project monitoring, evaluation, and reporting activities.

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
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Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04		x	
Forests OP/BP 4.36		x	
Pest Management OP 4.09		x	
Physical Cultural Resources OP/BP 4.11		x	
Indigenous Peoples OP/BP 4.10		x	
Involuntary Resettlement OP/BP 4.12		x	
Safety of Dams OP/BP 4.37		x	
Projects on International Waterways OP/BP 7.50		x	
Projects in Disputed Areas OP/BP 7.60		x	

V. Financing (in USD Million)

Total Project Cost:	7.98	Total Bank Financing:	0.00
Financing Gap:	0.00		
Financing Source			Amount
Borrower			2.50
Global Environment Facility (GEF)			5.48
Total			7.98

VI. Contact point

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