**PROJECT EXECUTIVE SUMMARY**

**GEF Council Intersessional Work Program Submission**

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**Contribution to Key Indicators of the Business Plan:**

1. Average annual GHG emissions reduction of about 1,004.2 ktonnes CO2 during the period 2005-2015
2. Average annual energy savings of about 189.5 ktoe during the period 2005-2015

**Record of endorsement on behalf of the Government(s):**

|  |  |
| --- | --- |
| Dr. Pham Khoi Nguyen, Chairman of GEF Vietnam, Ministry of Natural Resources and Environment (MoNRE) | Date*:* February 9, 2004 |

Approved on behalf of the United Nations Development Programme (UNDP). This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for work program inclusion.



Yannick Glemarec Manuel. L. Soriano

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**Agency’s Project ID:** PIMS 2057

**GEFSEC ID:** 1336

**Country:** Vietnam

**Project Title:** Promoting Energy Conservation in Small and Medium Enterprises (PECSME)

**GEF Agency:** United Nations Development Programme (UNDP)

Other Executing Agency (ies): N/A

**Duration:** 5 Years

**GEF Focal Area:** Climate Change

**GEF Operational Program:** OP 5

**GEF Strategic Priority:** Increased Access to Local Sources of Financing for Energy Efficiency; and

Transformation of Markets for High-Volume Products or Processes

**Estimated Starting Date:** 1 January 2005

**IA Fee**: $382,000

**Financing Plan (in US$):**

# GEF Project/Component

|  |  |
| --- | --- |
| Project | 5,469,000 |
|  PDF A  |   |
|  PDF B | 330,000 |
|  PDF C |   |
| Sub-Total GEF: | 5,799,000 |

# Co-financing

|  |  |
| --- | --- |
| Government Ministries | **1,100,000** |
|  MOST MOI MPI | 1,000,00050,00050,000 |
| **Local Govt. Agencies** | **2,600,000** |
|  ECCs HCMC DOST Pollution Mitigation Fund  | 600,0001,000,0001,000,000 |
| Private | **19,100,000** |
|  INCOMBANK VINACEGLASS | 14,100,0005,000,000 |
| **Others** | **500,000** |
| Sub-Total Co-financing: | 23,300,000 |
| PDF-B Co-financing | 128,250 |
| TOTAL Project Co-financing | 23,428,250 |
| TOTAL Project Financing: | **29,227,250** |
| Financing for assoc. activities: N/A  |

1. **Project Summary**
	1. Project Rationale, Objectives, Outputs, and Activities

The Promotion of Energy Conservation in Small and Medium Enterprises (PECSME) Project is an integrated set of activities (in 6 specific components) designed to address in a holistic fashion the barriers to widespread adoption of energy conservation measures and practices in Vietnam’s SME sector. The project builds on and is informed by a range of projects and analyses undertaken by the Vietnam Energy Conservation Program (VECP) in its work since 1996. It will cover management practices, technician and operator training, technologies, funding mobilization, and policy and institutional capacity building. It will contribute to the transformation of Vietnam’s SMEs from highly energy inefficient and polluting to energy efficient with greatly reduced pollution through the operation of a carefully selected mix of barrier removal activities implemented by government agencies, financial institutions, education providers, NGOs and mostly private sector energy efficiency service providers (EESPs). The project will achieve its objectives through programs with existing SME infrastructure support providers on: (1) policy and institutional support development; (2) communications and awareness; (3) technical capacity development; (4) energy efficiency services provision support; (5) financing support; and, (6) demonstrations.

* 1. Key Indicators, Assumptions, and Risks (from Logframe)

The project’s key overall success indicators are: (1) Average annual GHG emissions from SME activities reduced by 1,004.2 ktonnes of CO2 from 2005 through the year 2015; (2) Average energy cost per unit production cost in the SME sector reduced by 10-15% by Year 5; and, (3) Average energy savings of 189.5 KTOE /year realized in the SME sector during the period 2005-2015. The key project activity indicators that will contribute to the key overall project success indicators are: (a) Three Circulars on Labeling, Tax Incentives and Financial Incentives approved by Year 3; (b) Dissemination of EC&EE information to SMEs from Year 3; (c) Training courses for SME managers and technicians held and at least 500 SMEs implementing EC&EE projects during Years 3 & 5; (d) Training courses on higher efficiency equipment conducted by year 3 and at least three manufacturers implementing or planning to produce high EC&EE equipment by project end; (e) Technical assistance provided to local EESPs in developing and delivering bankable project proposals, business plans and in securing financing arrangements for SME clients by Year 4; (f) Guarantee funding mechanisms established by Year 2; and, (g) Implementation of 500 EC&EE investments arising from successful demonstration projects and facilitated through financial guarantee and energy services delivery mechanisms starting mid-Year 3.

The major assumptions in achieving the project goal and purpose are: (1) Project monitoring activities are fully supported; (2) Monitoring of energy savings from Demonstration and Pipeline projects are continued beyond the project life; (3) GHG emission factors are consistent with MoNRE projections and the National GHG inventory; (4) Capacity to monitor success of EESPs in the market is in place (developed) during the project; (5) Monitoring and documentation of energy conservation and energy efficiency (EC&EE) activities in the wider SME sector are maintained after the project; and, (6) The private sector’s interest to collaborate with the project’s support activities is sustained during and beyond the project.

The overall project risk is assessed as being low to moderate. The different risks that were identified during project formulation are the following: (1) Insufficient Government Support; (2) Lack of Cooperation by the Private Sector; and, (3) Market/Economic External Risks.

1. **Country Ownership**
	1. Country Eligibility

Vietnam has ratified the UNFCCC on 12 May 1994

* 1. Country Drivenness

Since 1995, a significant formal program to improve energy conservation and energy efficiency (EC&EE) has been underway as part of the Vietnam Energy Conservation Program (VECP) - as one of the nine projects undertaken following the establishment of the Vietnam National Program for Sustainable Energy Development Policy. SMEs are a key and growing sector in Vietnam, their energy efficiency is generally poor, and existing SME EC&EE improvement activities lack resources and capacity to make the necessary tangible gains. Some practical SME EC&EE implementation efforts to date have been achieved, in particular through energy auditor training, but a much broader and integrated approach is required to make a tangible and sustainable impact and unlock the significant EC&EE and hence available CO2 reduction potentials available.

A particularly important milestone in the realization of EC&EE in Vietnam has been the 3rd September 2003 signing by the Prime Minister of the Decree on Energy Efficiency and Conservation (EC&EE Decree) - which now provides a timely and necessary overarching framework for the realization of EC&EE activities in all sectors of Vietnam’s economy. The challenge now is to effectively implement, through appropriate programs and capacity building, the policy provisions of the decree. The PECSME project will build on the signing of the EC&EE Decree to achieve tangible EC&EE impacts for the SME sector, as well as providing training and training capacity development, financial mobilization, and technology development and deployment elements. PECSME will be a key capacity building component in the practical implementation of the EC&EE Decree in Vietnam.

1. **Program And Policy Conformity**
	1. Project Design

PECSME will address, in an integrated fashion, the barriers to the improved energy efficiency of SMEs, which still exist despite the various government and private sector programs and activities in the past. These interventions are required to overcome the barriers to SME EC&EE implementation despite the growing market orientation in energy pricing, and despite the supportive energy policies in place that still generally need implementation support. The main barriers facing energy conservation in Vietnam’s SME sector were identified through surveys, interviews and discussions with key stakeholders during the PECSME PDF-B Exercise, and were then discussed and summarized during the logical framework analysis (LFA) workshop with key stakeholders.

The goal of the project is the reduction in the annual growth rate of GHG emissions from the five selected SME sectors. The project purpose is the removal of barriers to the uptake of energy conservation technologies, improved management focus on reducing energy costs, enhanced technician training in energy conservation practices and improved operation of energy using equipment by SMEs. The five SME sectors being addressed in the project are brick, ceramics, textiles, paper and food processing - and they were chosen on the basis of their magnitude of energy use, their identified energy conservation potentials, and their use of common industrial technologies. PECSME is comprised of six (6) integrated and synergistic components that work together to address the barriers to the widespread adoption of SME EC&EE. Each component consists of specific activities designed to address these barriers. The six project components are as follows, with later elements in each component learning from early experience as the component is realized:

Component 1: EC&EE Policy and Institutional Support Development Program. This involves capacity building for government policymakers to develop appropriate policies, circulars, standards and enforcement mechanisms; strengthening the capacity of coordinating agencies and support for local technical support networks; and enhancing the EC&EE impact of environmental standards.

Component 2: EC&EE Communications and Awareness Program. This involves capacity building and support for the design of an overarching communications program utilizing existing national and regional information dissemination networks, with an integrated set of awareness and information gathering, dissemination, and updating activities; holding exhibitions of energy efficient equipment; and capacity building activities in energy consumption monitoring systems.

Component 3: EC&EE Technical Capacity Development Program. This involves capacity building in the training of managers, technical staff, workers and trainers in EC&EE; and the establishment of suitable training courses and their evaluation - with a particular focus on “training the trainers”.

Component 4: Energy Efficiency Services Provision Support Program. This involves capacity building and support for a credible high quality energy-efficiency services provision industry: with support from public energy conservation centers, universities, polytechnics and technician training providers; and supported by enhanced local capacity in affordable EC&EE equipment supply and R&D capabilities.

Component 5: EC&EE Financing Support Program. This is based on the experience that the enhanced mobilization of existing financial mechanisms requires technical assistance and involves capacity building and support for enhanced EC&EE project investment through a risk-sharing loan guarantee funding mechanism for existing environmental, donor and commercial bank funds.

Component 6: EC&EE Demonstration Program. This involves the provision of technical support for the demonstration of the cost effectiveness, technical performance and project financing of applicable EC&EE technologies and their replication in 500 SME EC&EE investment projects.

* 1. Sustainability (Including Financial Sustainability)

The primary objectives of the project are directed toward sustainability by accelerating the uptake of energy efficient management and operational practices, and energy efficient technologies, in Vietnam’s SMEs. Sustainability of project outputs is ensured through the outputs of each of the project components, both individually and in aggregate, e.g., the demonstration of energy efficiency in representative SMEs; replication through a pipeline of investment projects utilizing existing environmental and development funds and commercial financing through a loan guarantee facility that will persist after the project; enhanced policy, institutional, energy labeling and norms development capacity; establishment of an effective information dissemination network through DOSTs (using ECCs as focal points) VCCI, VCA and SME associations; support for commercially successful EESP businesses; and establishment of a sustainable training network. To ensure the sustainability of the project beyond its end, the project will embed the various components and activities with stakeholders who are likely to be able and willing to continue the project objectives after the project ends. MOST will not only be directly responsible for executing the project, but it will also continue with its primary responsibility to spearhead and sustain the activities after the project’s formal end in 2009.

* 1. Replicability

The activities in the project will create an enabling environment for the widespread utilization of energy efficient management, operational practices and technologies, in Vietnam’s SMEs. This will lead to replications of specific project interventions. In particular, the demonstration projects will showcase feasible design and application of energy efficient management, operational practices, funding mechanisms and technologies. Replication is an integral component of the project design from energy and GHG emissions reduction from the 500 pipeline investment projects that will be replicated from the successful demonstration projects. A successful PECSME project can also be expected to have positive replication in sectors outside the chosen five SME sectors.

* 1. Stakeholder Involvement

During the preparatory phase of PECSME (the PDF-B exercise) all relevant stakeholders were involved in elements of the project design through work in one or more of the seven sub-contract teams, participation in the various project workshops, participation in the Logical Framework Analysis (LFA) workshop, or were consulted through market surveys, or interviews. Those consulted included, MOST, MOI, MONRE, SMEDD, MOF, MPI, NEA, local EC Centers, local peoples committees, Vietnam Women Union, VCCI, VCA, commercial banks, environment funds, EESPs and prospective EESPs, and industry associations. The proposal envisages strong links with other international programs in Vietnam, in particular cleaner production. This is also reflected in the utilization of existing development and environmental funds in PECSME, rather than in the establishment of any new separate EC&EE funds.

* 1. Monitoring and Evaluation

Project monitoring, evaluation and dissemination will be undertaken in accordance with UNDP and GEF established procedures. As executing agency, MOST will take overall responsibility for project establishment, operation and monitoring and evaluation. A formal Monitoring and Evaluation (M&E) strategy and plan will be developed and implemented in the full-scale project to track the progress and results of the activities, as well as in tracking impacts after the end of the project. In addition, MOST will carry out continuous self-monitoring, based on the success indicators and means of verification for each activity that will be carried out under this project. In order to ensure coherent, coordinated and timely implementation of project activities, appropriate practical mechanisms, M&E procedures and implementation arrangements will be developed. M&E activities will be undertaken to best international practice standards with reference to the International Monitoring and Verification Protocol methodology. A clear indication of the realization of the project's purpose will come from the demonstration of delivering EESP services; the number of energy conservation projects funded using environmental and development funds and commercial banks; and the uptake of financial assistance mechanisms including the guarantee funding mechanism. Surveys will be conducted during the project to track these and other indicators of project impact. MOST will also be responsible for ensuring that suitable monitoring and evaluation is undertaken for all the demonstration sites. Project evaluation reports will be publicly available.

1. **Financial Modality And Cost Effectiveness**

The total cost of implementing the PECSME full project is US$ 28,769,000. This excludes the US$ 458,250 for implementing the PDF-B exercise. Around one-sixth (19%) of the full project cost is the proposed contribution from the GEF at US$ 5,469,000. The government ministries, local government agencies, the private sector and others will co-finance the project in the amount of US$ 23,300,000. The project budget will be used as follows: US$ 1,239,000 for policy and institutional development capacity building and support; US$ 1,446,000 for communications and awareness capacity building and support; US$ 1,502,000 for technical capacity development and support; US$ 2,162,000 for energy efficiency services provision industry capacity building and support; US$ 3,545,000 for financing capacity building and support; and US$ 18,855,000 for demonstration projects’ technical support. The breakdown of the co-financing for the project (including that for the PDF-B exercise) is shown below:

| **Name of Co-Financier (Source)** | **Amount, US$** | **Total** |
| --- | --- | --- |
| **Cash** | **In-Kind** |
| **Government Ministries** |  | **1,100,000** |
|  MOST | 500,000 | 500,000 | 1,000,000 |
|  MOI | 50,000 |  | 50,000 |
|  MPI | 50,000 |  | 50,000 |
| **Local Government Agencies** |  |  | **2,600,000** |
|  EC Centers  |  | 600,000 | 600,000 |
|  HCMC Dept. of Science & Technology | 1,000,000 |  | 1,000,000 |
|  HCMC Pollution Mitigation Fund | 1,000,000 |  | 1,000,000 |
| **Private Sector** |  | **19,100,000** |
|  INCOMBANK | 14,100,000 |  | 14,100,000 |
|  VINACEGLASS | 5,000,000 |  | 5,000,000 |
| **Others** |  |  | **500,000** |
|  HUT | 200,000 |  | 200,000 |
|  IHER | 100,000 |  | 100,000 |
|  Women Union | 100,000 |  | 100,000 |
|  Institute of Energy | 100,000 |  | 100,000 |
| **PDF-B Co-Financing** |  | **128,250** |
| MOST (Government) | 4,000 | 74,250 | 78,250 |
| EDP (Netherlands NGO) | 30,000 |  | 30,000 |
| SIDA (International organization) | 20,000 |  | 20,000 |
| Total Project Co-Financing |  | **23,428,250** |

*NOTE: All co-financiers have issued their letters of commitments for co-financing (see attached)*

1. **Institutional Coordination and Support**
	1. Core Commitments and Linkages

The various stakeholders of the project include those that were involved in the PECSME design and will be involved in the project implementation. The primary and leading stakeholder is the Ministry of Science and Technology (MOST), which is the designated executing agency of the project. The MOST is responsible for state management in the fields of scientific research, technological development, standardization and intellectual property in the industrial sector throughout Vietnam. The MOST unit that will be involved in the project implementation is the Department for Science and Technology Management in All Economic Sectors – which is also responsible for implementation of the VECP program. Most of the other government agency stakeholders have mandates that are related to and/or are in support of SME EC&EE activities in Vietnam. The co-financiers of the project from the public and private sectors are also involved in the promotion, development and implementation of EC&EE in SMEs. The PECSME activities are complementary to the current VN DSM and EE Phase 2 project - which is currently selecting consultants, and are compatible with the recently approved VEEPL GEF project activities.

* 1. Consultation, Coordination and Collaboration Between IAs, and IAs And EAs, if Appropriate

The team that developed the full-scale PECSME has consulted and involved the various stakeholders from the VECP program and related activities that have been implemented in Vietnam with assistance from a variety of international donors since 1995. The project was developed in close cooperation with both the local stakeholders, including local NGOs/CBOs and the UNDP-GEF Regional Coordination Unit in Kuala Lumpur. The UNDP office in Hanoi is fully involved in the project development through its participation in the various stakeholder and co-financing planning meetings and technical workshops during the PDF-B exercise.

* 1. Implementation Arrangements

As Executing Agency, MOST will form a suitable Project Advisory Board consisting of representatives from MOST, MPI, MOI, MOF, MONRE, VCCI, VCA, ECCs and other key stakeholders, as well as UNDP-Hanoi. This Board will be created to provide policy guidelines for the various project components. The MOST Minister will assign a suitable person to chair the Board. The UNDP office in Hanoi, together with the UNDP-GEF Regional Coordinator for Climate Change in the Asia-Pacific region will carry out the GEF oversight.

The project will be executed in accordance with UNDP National Execution (NEX) procedures. The MOST (executing agency) will ensure that all project activities are coordinated with related initiatives and are complementary to activities already undertaken in the country. It will coordinate with UNDP in the implementation of the project activities and project monitoring and evaluation, and will be responsible to UNDP for the achievement of the project objectives, for all project reporting, including the submission of work plans and financial reports.

MOST will establish a suitable project management office (PMO) that will be responsible for the overall operational and financial management and reporting of the UNDP-GEF funds in accordance with the rules and regulations for NEX projects. The PMO will be led by a suitable Project Manager who will manage four task specialists to implement the six components of the PECSME project. Local and international experts will be retained and brought in to support the PMO as and when needed to support the Vietnamese led project activities. The PMO will coordinate with all the project partners, particularly those implementing parallel projects whose results feed in, or are integral parts of, the PECSME.

**Annex A: Incremental Cost Analysis**

PECSME is made up of six components addressing in an integrated fashion the barriers to the widespread improvement in SME energy use in the country. The contributions by the Vietnam public and private sector partners were discussed at the PDF-B LFA workshop and have been confirmed in the formal letters of commitment attached to this proposal. Each project component will address the shortfall of the past and current efforts by the government and the private sector in promoting EC&EE in the SME sector in Vietnam, as follows:

Component 1: EC&EE Policy and Institutional Support Development Program. This involves capacity building for government policymakers to develop policies, circulars, standards and enforcement mechanisms; strengthening the capacity of coordinating agencies and support for local technical support networks; and enhanced EC&EE impact of environmental standards. These additional capacity building and support activities will cost US$ 489,000 to implement. The total cost of the baseline activities is US$ 750,000. This component will cost US$ 1,239,000 to implement.

Component 2: EC&EE Communications and Awareness Program. This involves capacity building and support for the development of an overarching communications strategy and under this strategy an integrated set of awareness and information gathering, dissemination, and updating activities, and capacity building activities in energy consumption monitoring systems. These additional capacity building and support activities will cost US$ 746,000 to implement. The total cost of the baseline activities is US$ 720,000. This component will cost a total amount of US$ 1,466,000 to implement.

Component 3: EC&EE Technical Capacity Development Program. This involves capacity building in the training of managers, technical staff, workers and trainers in EC&EE; and establishes suitable training courses and their evaluation and sustainable operation beyond the program’s life. These additional capacity building, establishment and support activities will cost US$ 902,000 to implement. The total cost of the baseline activities is US$ 600,000. This component will cost a total amount of US$ 1,502,000 to implement.

Component 4: Energy Efficiency Services Provision Support Program. This involves capacity building and support for a credible high quality energy-efficiency services provision industry, including the enhanced supply of energy efficient equipment, with support from public energy conservation centers, universities, polytechnics and technician training providers. These additional capacity building and support activities will cost US$ 422,000 to implement. The total cost of the baseline activities is US$ 1,740,000. This component will cost US$ 2,162,000 to implement.

Component 5: EC&EE Financing Support Program. This involves capacity building and support for enhanced EC&EE project investment through a risk-sharing loan guarantee funding mechanism utilizing existing environmental, donor and commercial bank funds. These additional capacity building and support activities will cost US$ 2,395,000 to implement. The total cost of the baseline activities is US$ 1,150,000. This component will cost a total amount of US$ 3,545,000 to implement.

Component 6: EC&EE Demonstration Program. This involves technical support for the demonstration of the cost effectiveness and technical performance of new EC&EE technologies for replication in 500 SME EC&EE projects. These additional technical support activities will cost US$ 515,000 to implement. The total cost of the baseline activities is US$ 18,340,000. This component will cost a total amount of US$ 18,855,000 to implement.

**Annex B: Project Logical Framework**

The table below shows the objectively verifiable indicators, sources of verification and critical assumptions for the PECSME goal, purpose and outputs/results. The detailed project framework design or project-planning matrix is shown in Annex B of the PECSME Brief. This was developed from the logical framework analysis workshop that was carried out during the PECSME preparatory activities (the PDF-B exercise).

| Project Strategy | **Objectively Verifiable Indicators** | **Sources of Verification** | **Critical Assumption** |
| --- | --- | --- | --- |
| A. Project Goal |
| Annual growth rate of GHG emissions from SMEs reduced through the removal of major barriers  | SMEs’ GHG emissions reduced by an average of 1,004.2 ktonnes of CO2 p.a. during 2005-2015. | * Sectoral energy use data.
* Inventory conducted by MONRE.
 | Monitoring activities under the project on fossil fuel consumption are fully supported. |
| B. Project Purpose |
| Energy utilization efficiency in SME sector is significantly improved | Average fossil fuel savings of 189.5 KTOE (Tonnes Oil equivalent)/year is achieved in the SME sector during 2005-2015. | * Documentation of the number of EC&EE investments implemented.
* Project M&E reports.
 | * EC&EE policies enforced.
* Private sector’s interest to collaborate is sustained.
 |
| Average unit energy cost in SME sector reduced by 10-15% by Year 5.  | Project surveys in 5 sectors and evaluation reports.  | Reliable data on energy savings available from SME records. |
| C. Project Outputs/Results |
| 1. EC&EE Policy and Institutional Support Development Program | Timely development and implementation of necessary regulations, circulars, support and control mechanisms and enforcement giving practical effect to existing policies; and better utilization of environmental standards to reduce GHG emissions by year 3. | * EC&EE policy recommendations.
* Relevant circulars and regulations.
* Survey on impact of incentives.
* Documentation of national SME development program.
* EC&EE Expert Assoc. Reports.
* New standards enforced by NEA.
 | * Related ministries assist in circulars/regulations development.
* Strict enforcement of circulars and regulations on incentives.
* MOST and ECCs support capacity building activities.
* SMEPC and SMEDD consider EC&EE in SME development.
 |
| 2. EC&EE Communications and Awareness Program | Establishment and operation of comprehensive communications strategy and a subsequent integrated information system gathering information from SMEs, development of information, dissemination of information through appropriate range of channels, and working with and through a range of information providers by end year 3. | * Progress reports.
* Documentation of strategy
* Documentation of training materials.
* Lists of training participants.
* Website hits on VCCI EC&EE info.
* Awareness campaigns’ evaluation.
* Report on SME EC&EE projects.
* SME energy-use database.
* Published leaflets and booklets.
* Documentation of info packages.
* Assessment of info. packages.
 | * Strategy is acceptable to, and “bought into” by stakeholders
* Participating organizations join & participate in information network.
* SMEs are willing to provide energy use and other information.
* Government continues info program after project end.
* SMEs participate in courses.
* EC&EE Champions, EESPs, and ECCs actively participate.
 |
| 3. EC&EE Technical Capacity Development Program | Establishment and operation of integrated and sustainable SME EC&EE training system for trainers, energy consultants, managers and technicians. | * Lists of certified trainers.
* Training material documentation.
* Training course evaluations.
* Surveys of SMEs.
* SME energy use reports.
* Energy audit reports.
 | * Trained trainers participate.
* SMEs report energy use.
* Technical universities and colleges include EC&EE in engineering curricula.
 |
| 4. Energy Efficiency Services Provision Support Program | Enhanced commercial energy efficiency services provision (EESP) industry effectively marketing services to SMEs and leading to wider use of energy audits, increased uptake of energy audit recommendations, and delivery of specialist services such as plant design and process integration, energy monitoring and plant commissioning, establishment and implementation of planned preventive maintenance regimes by year 4, training in, and R&D support for, local EC&EE equipment supply capabilities by year 3 | * EESP training evaluation reports.
* Establishment of EESP institutional and legal framework.
* Establishment of new EESPs.
* Documentation of technical assistance provided to EESPs.
* Evaluation of EESP contracts and projects.
* Evaluation of EESP service delivery.
* Local equipment supplier and supporter reports.
* Documentation of R&D program.
 | * Existing EESPs interested in receiving technical assistance.
* Energy consultants, financers, and entrepreneurs interested in forming new EESPs.
* EESPs provide reliable and quality energy services.
* SMEs aware of EC&EE benefits of using EESPs.
* Local equipment suppliers interested in industrial equipment energy performance improvement.
 |
| 5. EC&EE Financing Support Program | Mobilization of necessary finance for SME EC&EE investments through loan guarantee fund by year 2 and development of a sustainable financing system for future SME EC&EE projects by year 5. | * Seminar materials developed.
* Training courses’ evaluation.
* Information page on VCCI website.
* Publication of brochures/guides.
* EC&EE SME loans made
 | * Financial institutions interested in, send capable staff to training, and extend credit to SME sector.
* VCCI supports activities.
* Existing environmental funds provide EC&EE loans.
 |
| 6. EC&EE Demonstration Program | Demonstration of new EC&EE technologies in credible, monitored and evaluated projects completed by mid-Year 3 leading to 500 sound EC&EE investment projects presented to banks for loans by SMEs starting mid-3rd year.  | * Demo project evaluation reports.
* Documentation of SMEs’ implemented EC&EE projects.
* Project progress reports.
* Final project report.
 | * Supportive DEMO sites.
* Financial institutions ready to provide EC&EE financing.
* 500 replication SMEs commit to implement EC&EE investments.
 |

**Annex C: Response to External Reviews**

1. **Council**
2. **GEF Secretariat**

|  |  |
| --- | --- |
| **Comments & Responses** | **Reference** |
| Program Designation and Conformity |
| **Comment**:Discuss the impact of energy pricing, energy availability, and energy policy development on incentives and means for energy conservation in SMEs.**Response**:Energy pricing in Vietnam is increasingly market oriented and there are further positive developments underway with the GoV steadily increasing electricity prices by 30% to fully reflect generation, transmission and distribution costs of future supply enhancements required. International markets currently set oil products and LPG prices. In the PDF-B exercise, energy policy was found to be broadly supportive to energy conservation and energy efficiency (EC&EE) efforts in SMEs, with the main need being to fully realize the existing positive policies in practice. References have been added to the PECSME Project Brief (PB) and Executive Summary (ES) to highlight these features. The EC&EE interventions that were incorporated in the PECSME project will focus on the current forms of energy that are being used by SMEs (e.g., coal briquettes, wood and other biomass aside from electricity and petroleum). These will apply to the processes and energy systems that are presently used in their operations. Based on previous studies and projects related to SME development in Vietnam, among the issues that bring about poor energy utilization efficiency in the SMEs are energy pricing, energy availability and energy policy implementation. The PDF-B exercise that was carried out to design the PECSME assessed and validated the impacts of these issues on the level of energy utilization efficiency and overall productivity of these establishments. The assessment gauged the levels of capacity (financial, technical and human), interest and willingness of the SMEs in improving their energy utilization efficiency and overall productivity, and the immediate and future needs to achieve such improvements. A favorable enabling environment in terms of, among others, availability and affordability of efficient forms of energy and energy systems would encourage and assist them in realizing such improvements.The PDF-B exercise evaluated the existing policies on the pricing and domestic supply/distribution of energy carriers, as to their contribution to the present level of energy utilization efficiency in, and the attitude towards energy conservation among, the SMEs. The extent of the current problems of lack of access to clean and efficient fuels by SMEs in rural areas; the widespread inefficient use of cheap and poorly manufactured coal briquettes; and the inefficient use of energy forms such as electricity will influence the type and number of interventions/activities that will be proposed for the PECSME. For example, considering that biomass energy is widely used in SMEs, activities that will address the improper and wasteful uses of such forms of energy will be covered in the interventions that will be provided to SMEs and relevant stakeholders.During the PDF-B phase of PECSME, appropriate measures and interventions that will eliminate the negative impacts of the existing energy and energy pricing policies on the continuous practice of EC&EE in SMEs were identified. PECSME has been designed to include activities that will:* Bring about changes in the energy supply/distribution policy of the government to enable SMEs easy access to the use of cleaner and more efficient fuels.
* Influence the establishment of infrastructures, by the government and the private sector, that will support the utilization of cleaner and more efficient fuels and/or the conversion/processing of coal and biomass to such environment-friendly types of fuels.
* Result in the provision of fiscal incentives to SMEs to motivate them to changeover to energy efficient production processes and invest in EC&EE.
* Influence the growth of the energy service industry (i.e., EESPs) in the country that will cater to both SMEs and large industries.
 | Project Brief: Paras 6 and 8;Executive Summary: Section 3.a  |
| **Comment**:Clarify role of EC Centers in accordance with WB comments 7/9/01, in particular on the number of centers, their location, and the forms of GEF support.**Response**:The EC Centers are meant to provide EC&EE information, consulting services, in-house training on energy management to SMEs, and support for the EC&EE Experts Association. In addition, they are also expected to provide technical assistance to EESPs in business plan development, EE project development, and energy management techniques (e.g., energy auditing). There are 5 existing ECCs in the country - Hanoi, Hai Phong, Da Nang, HCMC and Can Tho, representing as regional representives for Northern, central and Southern parts of the country. These ECCs in these 5 cities will be the main focus, with the establishment of additional ECCs and expansion of services only considered as needs are established and confirmed with stakeholders. GEF assistance will be utilized for the enhanced capacity of ECCs and the national Vietnam Energy Conservation Program (VECP). | Project Brief: Para 94.d |
| **Comment**:Describe how available are EE technologies for SMEs in the Vietnam market.**Response**:The technologies that will be demonstrated in PECSME, and that are to be replicated in the resulting 500 pipeline projects, are established, well-known and proven EC&EE measures in other developing countries. The measures cover improved boiler operation, higher efficiency combustion in modern kilns using LPG to replace traditional low efficiency and highly polluting coal fired kilns, mixing powdered coal with clay for more direct firing of bricks and using waste heat to pre-dry incoming bricks, the use of higher efficiency electric motors and variable speed drives, insulation of steam pipe work, enhanced condensate recovery, and so forth. Such technologies are either available or well within the capability of existing manufacturers and suppliers in Vietnam to import and support, with some modest TA to be provided in some targeted areas. | Project Brief: Para 27 |
| **Comment**:In accordance with WB comments, propose financing mechanisms through existing SME financing programs, or justify why such programs are insufficient for EE investments.**Response**:GEF assistance is required for removing barriers that would hinder the effective implementation and utilization of the current and future SME support programs in Vietnam. Such assistance is also needed to develop the means to better utilize the existing financing schemes and credit facilities for SMEs to assist in their development efforts, in particular their EC&EE activities. The PDF-B exercise has identified opportunities for GEF involvement in improving the utilization of existing financial mechanisms. The GEF contribution to the full-scale project will be used for designing and implementing the enhanced use of existing schemes for financing the SMEs, and to support incremental financing that would facilitate expansion of existing funds for financing EC&EE activities of SMEs.  | Project Brief: Paras 79.k and 98; Executive Summary: Section 3.a Component 5 |
| **Sustainability (including financial sustainability)** |
| **Comment**:Explain sources of continued financing for EC centers, sustainability of SME financing programs, and expected models for ensuring ESCO businesses are viable.**Response**:The existing ECCs have regular budget allocations from their relevant provincial government units (e.g., DOSTs) as well as support from their local People’s Committees (local government). The central and local government are expected to continue supporting financially the ECCs, with additional donor support being likely but not a pre-requisite for their continued operation. Moreover, as mentioned in the EC&EE Decree, the SMEs’ EC&EE investment projects will be considered for obtaining medium and long term loans from the Development Assistance Fund or the Science and Technological Development Support Fund. Another possible financing source could be a fund, which consists of monies collected from a levy to energy users. This is similar to the one in Thailand, whereby the government levies a fee on energy users, which would be used to fund EC&EE activities of SMEs (or maybe of all industries – SOEs, big private industries and SMEs). The levy could be for example 1/10th Vietnam Dong per liter of gasoline purchased and per kWh used. The fund could encourage the rational use of energy (particularly oil-based fuels and electricity), stimulate the use of alternative forms of energy, and improve the use of electricity. By the end of the project, it is expected that ECCs would be transformed into partially cost-recovery operations and would be able to charge for the services that they will render to EESPs and SMEs. Such services could include the provision of training programs, design of energy management programs, provision of technical advice, etc. Assuming mandatory energy auditing is prescribed (as part of the barrier removal interventions covered by recently signed EC&EE Decree), the ECCs could be mandated to accredit energy auditors and review audits. That way, the ECCs could generate revenues from the accreditation process and from the review of energy audit reports. | Project Brief: Paras 45 and 103 to 109,  |
| **Replicability**: |
| **Comment**:It is presumed that the EC centers will play a key role in replication, both within Vietnam and to other countries. Thus continued viability and funding of the centers, as well as their close participation in the project, is key to replication.**Response**:The local ECCs will be key local partners supporting the local replication of the nationally demonstrated SME EC&EE technologies. The ECCs are supported by both the local arms of MOST (DOSTs) and by the local Peoples Committees (local government). The ECCs are also starting to obtain some cost-recovery from their services provided from for example training seminar attendance. This reliance on multiple funding sources will ensure a more robust financial basis for the ECCs than if all their funding came from only one source. The ECC in Vietnam’s largest urban area (Ho Chi Minh City) is particularly active, is utilizing such diverse multiple funding sources, enjoys strong local government support, and is establishing useful international linkages. | Project Brief: Para 111-Part of Local Governments |
| **Stakeholder Involvement**: |
| **Comment**:Involvement of all stakeholders in GoV needs to be ensured. Is there a chance to get GoV to concentrate SME related responsibilities?**Response**:The PDF-B Exercise confirmed that GoV already has all the necessary SME EC&EE support functions in various relevant parts of the bureaucracy, and that such agencies were generally aware of each other’s existence and the relevant boundaries between agencies. The need for effective overarching co-ordination between SME support agencies is recognized, and SMEDD and SMEPC have been established and have work underway to provide this necessary SME support activity co-ordination. Some spirited debates were undertaken within the PDF-B work. Institutional sub-contract work as regards the desirability of streamlined SME support structures, but it was finally agreed that even if this streamlining was desirable, that it is by no means certain that tangible progress in such an area of government reorganization could be achieved in the full-scale project five year timescale, nor would it be assured that such a finding would be acted on by GoV. Thus the consensus that emerged, and is included in the PECSME Project Brief, was to utilize the existing SME support structures - which should prove adequate for the task with active co-operation as agreed to for the full-scale project design.Under the PECSME work program, SMEDD and SMEPC will be responsible for incorporating EC&EE into the National SME Development Support Program. | Project Brief: Para 94. c. |
| **Monitoring and Evaluation**: |
| **Comment**:There must be many lessons from supporting SMEs from both GEF and non-GEF projects, in particular through the IFC/GEF SME program. Brief should describe these lessons in some detail and show how they are incorporated into the project design.**Response**:One of the major activities of the PDF-B exercise was the review of foreign experience in establishing and operating SME development funds, as well as lessons learned from previous GEF, and non-GEF projects on SMEs. The international financial expert carefully considered the results of these evaluations and the financing sub-team during the PDF-B exercise, discussed with stakeholders, and included in the PECSME Project Brief design. Particular features included in the PECSME design for financing were the design of loan guarantee funds to share the risk between all participants to minimize complexity of loan evaluation, the need to use existing financial institutions with existing SME relationships and a suitable existing branch structure, the need for TA to be targeted at loan officers, the need for regular reviews to gauge progress and make any necessary changes as the scheme unfolds, and the need to focus on mobilization of existing under-disbursed funds where they exist as in Vietnam rather than design new funds and mechanisms. | Project Brief: Paras 25 and 26 |
| **Financing:** |
| **Comment**:Describe sources of investment financing for SMEs.**Response**:During the PDF-B exercise, considerable government support was identified and secured, and sufficient investment financing was secured from INCOMBANK, VINACEGLASS and HCMC Pollution Mitigation Fund to support the number of anticipated pipeline projects. A number of potential donors have expressed support to the SME development efforts of the country, and these financing sources have been identified and will be followed up in the full-scale PECSME to assist in particular aspects of TA and investment financing. Thus the investment financing for SMEs detailed in the PECSME full-scale project design is a deliberately conservative figure that only includes those that have been fully secured. There are strong prospects in investment financing sources that have previously been involved in Vietnam including: (1) Banking institutions: Other commercial banks, People’s Credit Funds, Leasing companies; (2) Non-banking institutions: Financial companies and leasing companies; (3) State Preferential credits: Social Policy Bank, Development Assistance Fund and programs; and (4) International Support Credits: SMEs Development Fund by European Union (SMEDF), Japan Bank for International Corporation (JBIC), Mekong Project Development Facility (MPDF) and World Bank’s Rural Finance Project. | Project Brief: Para 132 |
| **Comment**:Financing plan, as submitted for WP inclusion in July 2004: GEF $5,799,000 (including $330,000 PDFB) Co-financing: Gov Ministries $1,100,000; Local Gov Agencies $2,600,000; Private (loans) $19,100,000; and Others $500,000. |
| **Issue No.1**: The proposed contribution from the GEF is significantly larger than the one proposed for pipeline entry from $3M to $5.799 M. Please justify this significant increase.**Response**:Given the rapid growth of SME sector in terms of number of enterprises during the project preparation and appraisal in the PDF-B exercise, the project design team agreed to a request by all key stakeholders to include some new activities and expand the participation of local governments in the provincial areas where many SMEs in the chosen five sub-sectors are located and causing the serious local pollutants. Therefore the cost of TA and capacity building has been increased accordingly. The new positive elements leading to a doubling of pipeline projects are as follows: a) The number of participating provinces has been increased from 5 to 10 (Hanoi, Hai Phong, Da Nang, HCMC, Can Tho, Hung Yen, Hai Duong, Bac Ninh, Dong Nai and Binh Duong). This doubling of participating provinces has enabled a consequential doubling in the number of pipeline projects to 500 projects; b) The assessment and improvement of technology suppliers have been included as new activities; and, c) the mobilization of existing underutilized development funds through a loan guarantee mechanism. The proposed GEF contribution was increased during the project design phase when it became clear that larger than anticipated co-financing was available for greater than anticipated pipeline project implementation of the energy efficiency technologies identified and documented in the earlier proposed 10 full-scale project demonstration projects. This increased pipeline project implementation was also found to be more viable than anticipated given the more favorable than anticipated factors of necessary institutions all being in place, existing un-allocated development funds already being in place that have been agreed to be allocated to PECSME, and the EC&EE decree being signed by the Prime Minister. Given those changes, the total cost of the project has increased to US$ 28.769 million. Therefore, the incremental cost contribution sought from GEF has been increased from the earlier estimate of US$ 3 million to US$ 5.469 million. | Project Brief: Paras 24, 25, 27 and 111-Part of Local Governments |
| **Issue No.2**: From the incremental cost matrix and the project indicative budget (project brief, page 51-53), it is unclear how much co-financing is allocated to capacity building and TA. Please clarify and demonstrate that the cost of TA and capacity building is shared among the GEF and other co-financiers. (The expected amount is at least $2M). (BB, 7/2004)**Response**:The table added to Annex A in the project brief details the cost sharing proposed amongst GEF and other co-financiers. A total of US$ 3.2 million from other co-financiers is allocated to capacity building and technical assistance. | Project Brief: Annex A: Paras 33 and 34. |
| **Institutional Coordination and Support: Consultation, Coordination, Collaboration between IAs, and IAs and EAs, if appropriate** |
| **Comment**:Plan and activities for coordination with WB/GEF energy efficiency project, as well as other relevant donor activities. **Response**:Among the key inception phase activities of the PECSME will be deriving a plan on how the full-scale PECSME will coordinate its activities with the WB/GEF EE Project. The PECSME PDF-B exercise identified that PECSME and the WB/GEF energy efficiency project are largely complementary as they are targeted at SMEs and large users/commercial buildings respectively. The installation of time-of-use (TOU) meters in the first part of the WB/GEF second stage project is entirely complementary with PECSME and does not include any degree of overlap as PECSME does not involve the installation of TOU meters. The second part of the WB/GEF second stage project has complementary activities to PECSME in terms of its fostering of energy auditing and the development of a commercial services industry in its large commercial buildings target sector, thus co-ordination with PECSME in the complementary target sectors will add value to both projects. Since this is an essential aspect of the PECSME project implementation, the steps/plan for this purpose are outlined in the PECSME Project Brief. | Project Brief: Paras 58, 111-Part of Ministry of Industry and 114 |
| Response to Reviews: Other IAs and RDBs |
| **Comment**:UNDP will be expected to respond to WB comments of 7/9/01, either in project brief and/or in a separate statement.**Response**:The WB comments of 9 July 2001 on the PDF-B Proposal Brief were responded to by UNDP-GEF. The summary of responses have been attached as Annex F of the Project Brief. The italicized texts are updates considering the actual outcomes of the completed PDF-B exercise.  | Project Brief: Annex F |
| **Summary Recommendations by Program Manager** |
| **Comment**:The project brief addresses in detail the majority of the issues raised by the GEF Secretariat and STAP reviews. The following two issues need further clarification:1. The project brief submitted for WP entry proposes a larger contribution from the GEF: from $3M at pipeline entry, to $5.469 (see financing section). Please justify this significant increase.
2. From the incremental cost matrix and the project indicative budget (project brief, page 51-53), it is unclear how much co-financing is allocated to capacity building and TA. Please clarify and demonstrate that the cost of TA and capacity building is shared among the GEF and other co-financiers. (The expected amount is at least $2M). (BB, 7/2004)

**Response**:Please see responses to both issues in the section on Financing  |  |

1. **Review by expert from STAP Roster**

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| **TECHNICAL REVIEW****VIETNAM: PROMOTING ENERGY CONSERVATION IN SMALL AND MEDIUM ENTERPRISES (PECSME)****Project Number: PIMS 2057****Summary and General Review**The proposal focuses on five industries that consist of emerging private small and medium-sized enterprises (SMEs), i.e. bricks, ceramic products, food processing, textiles and pulp and paper. Private industry is emerging in Vietnam with the support of the Vietnamese government. The new industries provide a challenge for energy policy, which was mainly directed towards state-owned enterprises. Furthermore, SMEs represent a challenge for energy efficiency policy in virtually every country; industrialized or developing. The PECSME proposal provides an innovative approach by combining various policy elements within one integrated policy approach. The proposal is well structured and contains all the elements to achieve success with a difficult sector like SMEs. There is a need for overall integration of the different components to make sure that all synergies are utilized. Secondly, the proposal needs to address a large number of details in the start-up of the project to ensure increased changes of success:* Establish overall coordination of the project and management of the Components.
* Re-evaluate the position of the development of an energy-efficiency equipment industry and align with the overall project goals**.**
* Design a communication and dissemination strategy tailored to each of the five selected sectors, based on a detailed survey and analysis of the needs and ways of communication the five sectors.
* Properly design an incentive and market structure to support a sustainable market for ESCOs for these SME-dominated sectors, if this proves to be an efficient mechanism for technology transfer.
* Focus the program not only on energy-efficient technologies but include improved management strategies and technologies in the training and other components of the program.
* Develop a clear framework and method for the (quantitative) evaluation of the overall project.
* Improve the sustainability of the program by embedding the financial aspects with long-term financial institutions, the technical aspects with energy service, technology suppliers as well as educational institutions, and the policy aspects with the proper agencies and ministries.
* Improve the presentation of the assessment of the benefits of the program in the proposal to enable improved evaluation and tracking of the success of the program.

I think that it is possible for the proposers to adapt and improve the proposal to take into account my suggestions discussed below in more detail. This would strengthen an already relatively strong proposal further. Scientific and Technical SoundnessThe proposal focuses on five industries that consist of emerging private small and medium-sized enterprises (SMEs), i.e. bricks, ceramic products, food processing, textiles and pulp and paper. Private industry is emerging in Vietnam with the support of the Vietnamese government. Nevertheless, the new industry provides a challenge for previously existing energy policies, mainly directed towards state-owned enterprises. Furthermore, SMEs represent a challenge for energy efficiency policy in virtually every country; industrialized or developing. The PECSME proposal provides an innovative approach by combining various approaches within one policy approach. The proposal is well structured and contains all the elements to achieve success with a difficult sector like SMEs. Having said this, there is a need for overall integration of the different components to make sure that all synergies are utilized. Secondly, the proposal needs to address a large number of details in the start-up of the project. Below the elements that need attention are addressed in more detail.The proposed program consists of six components, of which the first focuses on the development of a policy framework and structure, which can help to sustain the incentives developed under the PECSME-program. While the component provides for the development of an infrastructure within the government and policy, it should also pay more attention to coordination of the components. There are clear links between all the components that need to be addressed through integration and to make sure that the program benefits as a whole. It seems that many of the components are internally consistent but need improved links to other components. For example, the demonstration project selection (Component 6) needs to be linked to the audits, development of a technical infrastructure for energy efficiency (energy conservation centers, ESCOs; Component 3), development of a financial infrastructure (banks, loan guarantee funds, sector organizations; Component 4, 5), as well as dissemination (Component 2). There are many of such linkages, and the proposal needs to make sure that proper integration is covered as part of Component 1. Maybe, the proposers can add a diagram to show the linkages and how these are coordinated.I propose to make the assessment and improvement of local service and technology suppliers (currently part of Component 3) an integrated part of Component 4. This element needs a sound basis. While there is a clear need for an infrastructure that can assist the SMEs in procurement and development of appropriate technologies, I wonder if this should be developed in isolation. To make sure that this development will not result in the dissemination of inefficient and outdated practices, the development of such an industry should be seen as part of wider energy services industry, that includes the ESCOs, energy conservation centers, existing universities and colleges, as well as technology suppliers (and importers) currently active in Vietnam. The development of a domestic industry for the development, construction and maintenance of industrial equipment should not be a goal of an energy-efficiency potential persé. By connecting it more clearly to the energy-efficiency “industry” it may ensure a stronger focus on energy efficiency.As with any program, of such proportions, the “devil is in the details”. For example, a number of questions tat come up when reviewing the proposal are (in no specific order):* how to select SMEs for training?
* how to integrate formal training with a typically more informal sector?
* how are audits connected to other elements (e.g. training, financing) of the program?
* how is a R&D program connected to the SME sector needs, university, training, as well as foreign technology developments?
* how is an ESCO market (or service supplier) connected to suppliers and SMEs?
* distribution of projects (appendix E) is skewed towards brick and ceramics. Why so few in pulp & paper, which is also a large energy user?

By developing clear criteria and goals at the start of the effort the potential for success may increase. While the proposal refers to the PDF-B document for the technical documentation of the proposal, the proposal would benefit if it would briefly describe the criteria used to select the sectors and how much these sectors contribute to the economy, and how they are expected to develop economically and technically in the future? Furthermore, are there regional clusters of specific industries, which may provide an avenue to improved dissemination strategies.The current proposal provides some estimates of the relative energy conservation potential within each sector (p.10), but does not clarify how this was defined (e.g. technical, economic, what payback criteria) and how it was determined. In appendix E the proposal provides some information on selected technologies and overall expected energy savings. Without further information it is hard to evaluate the selection of energy efficiency measures, the likely energy savings, and costs of implementation (and hence funding and loan guarantee funds). The evaluation of the potential for energy efficiency improvement is very unclear. It remains unclear how the expected energy savings are linked to the selected measures and to the individual sectors. The PDF-B may contain this information, but it would be good if this information would also be summarized in the current proposal or an appendix. Appendix E of the current proposal provides average data, based on statistical data and surveys of the five industries. The data and survey are very valuable. However, the proposal does not contain any data on economic, environmental and product quality issues of the sectors. This is not only important to evaluate the co-benefits of the proposed program, but also to evaluate the most successful direction and implementation of the proposed program, as well as evaluate the sustainability of the program in the long term.While the proposal contains an adequate discussion on the general barriers for energy-efficiency improvement for SMEs, it would be good to assess the main barriers for each of the selected sectors and how this affects the detailed design of policy approaches to ensure efficiency and effectiveness. It is likely that brick producers that spend a large part of their production costs on energy face different barriers than food producers. On the other hand, brick makers that supply a local market will operate in a different economic climate than ceramic producers that export their products. For example, given the lack of specialized personnel and relative low level of formal training within SMEs, training in ‘best practice’ management strategies and practices would be an important item to add to the program. Training should not be provided as a single event, but should be provided in the form of continuous learning. Providing a program of continuous training will also help to build an active network of plant operators and managers, contributing to the success of the overall program. The proposals to develop an infrastructure for continuous learning through the establishment of training courses on universities and through development of a network of energy service and technology suppliers are great and innovative. However, key to the success is the establishment of an effective communication strategy embedded in the environment in which each of the five sectors work.Also, the proposal notes that SMEs often lack knowledge on the supportive policies available to SMEs, but it does not provide a clear approach to ensure that the proposed program will not suffer from the same barrier. More generally, this issue reflects the manner and methods that SMEs in Vietnam use to collect information on technology and services (including financial). Are the proposed dissemination strategies (e.g. website, leaflets, etc.) most effective, or are other strategies more effective in sector that is currently defined by a large informal organization, if any organization at all. Again, detailed analysis at the start of the project will help to design such an effective communication and dissemination strategy.Hence, I propose that a detailed survey and analysis of the barriers and most effective ways to communicate with the SMEs and sector organizations, disseminate the results, improve access to services, technology and funding in the selected five sectors, is done in the very beginning of the project. This would ensure improved changes of success. Again, part of this information may be contained in the PDF-B document, but the generalized discussion in the current proposal does not allow evaluation of the specific needs and services needed for the five selected sectors.Finally, a few questions around the financing of the program may need some further attention in a revision of the proposal. Given that the largest part of the funding comes from the private sector (i.e. for investments in energy-efficient equipment), how is this guaranteed? Who are the main players? Experience with SMEs in China (the former Township and Village Enterprises) has shown that some can rapidly develop in larger enterprises with substantial financial ability to invest. However, it is unclear if the Chinese experience is a good comparison for Vietnam. Also, how are the demonstration projects integrated with the ESCOs and trainings. Can the small sector of energy conservation centers/ESCOs provide $400,000?**Global Environmental Benefits (and Drawbacks)**The proposal does not provide an understandable estimate of the overall direct energy savings and GHG mitigation potential from the proposed program and estimates of the indirect savings due to dissemination and replication throughout the five sectors. The provided estimates seem reasonable on first impression. From the presented data of the PDF-B document it seems that detailed assessments have been made. However, it is unclear from the current proposal how the estimates of potential savings are based on the selected measures and improved energy management practices, and how penetration rates affect the results. In the current Appendix E there are some inconsistencies, for example, in the text (p.81) total energy savings of 175.4 ktoe by 2015 are given, but in Table E-2, the 2015 energy savings are estimated 336.4 ktoe. Which one has been used by the proposers? A more detailed discussion would make a stronger case. Electricity savings are only expressed in final energy. This leads to an underestimate of the total primary fuel savings that will be achieved. Other Environmental BenefitsThe proposal does not estimate other environmental benefits of the improvements in energy-efficiency. This is unfortunate, as these savings will be very important for local air pollution (e.g. SOx, NOx, PM) reduction. Although the GEF Operational Strategy focuses on climate change, these improvements in local and regional air quality are very important for local support of the program. Furthermore, improvements in working conditions and employee health are important co-benefits.GEF PrioritiesThe project fits with the GEF priorities as defined in the Operational Strategy for Climate Change and the Operational Program for removal of barriers to energy efficiency and energy conservation. The proposed program will remove and reduce barriers to energy-efficiency improvement in an industry that traditionally is hard to reach with energy policy (SMEs). EvaluationThe proposal provides for evaluation of the training program, the effectiveness of financing mechanisms, and the demonstration program. There is also a clear need for a quantitative evaluation of the total program results. The proposal does not provide any methods for evaluation. While it is hard to quantitatively evaluate program elements such as dissemination and stakeholder participation, it is important to measure those elements that can be quantified, e.g. achieved energy savings of the demonstration projects, sales of the technologies that are proposed and the effects of the proposed energy service companies. For this purposes the proposers should develop a clear protocol, possibly following the International Monitoring and Verification Protocol (IPMVP). Furthermore, it is advised to have the evaluation done by an independent organization to ensure unbiased results. ReplicabilityA dissemination approach is developed to reach out to the SMEs and a future energy service and technology suppliers industry. The expected growth of the five selected industries would provide ample potential for replication. Further replication outside of the concepts developed, and especially the combination of a number of approaches for barrier removal may be replicable in other sectors dominated by SMEs in countries in the region.SustainabilityThe sustainability of the proposed program will depend on the establishment of networks and an organizational structure that can survive without additional international funding after 5 years. The likelihood will depend on the effectiveness and efficiency of the program in reaching out to the SMEs, providing a sustaining infrastructure for energy service and technology suppliers, continued education, achieving cost reductions for SMEs, while demonstrating the overall gains for the Vietnamese economy and (global) environment.There are a number of elements in the proposal that need attention in evaluating the long-term sustainability of the program. First of all, how can the proposed initiative for energy-efficiency improvement in SMEs build on the existing SME-infrastructure (e.g. SMEDD, SMEPC, Credit Guarantee Fund), and where advisable, be integrated, to ensure long-term interest in energy-efficiency improvement within the five sectors, and a sustainable implementation and dissemination infrastructure, as well as policy integration after the five-year project?Secondly, the sustainability of the ESCO market for industry in Vietnam is an uncertainty factor. Worldwide, ESCO-activity in industry has been limited, and experience relatively recent. It is unclear from the proposal what the ESCO-experience is in Vietnam, especially with SMEs. This may need more research at the beginning of the project, to identify the most effective and successful ways to improve collaboration between ESCOs and SMEs. Is there ESCO experience in Vietnam? SMEs seem a risky market for ESCOs with high transaction costs, how to make this sustainable? Can the program learn from international experiences? A third component to ensure long-term sustainability of the program focuses on the financial support of energy-efficiency investments. The program needs to learn from past experiences to develop a financial infrastructure for energy-efficiency (e.g. show to banks that energy-efficiency is a sound and bankable investment) *and* SMEs (e.g. demonstrate the importance of proper financing of technologies with high upfront costs to ensure long-term business success). Are there any experiences with loan guarantee funds for SMEs (and the sustainability thereof) in Vietnam? Why were some of the financial support programs for SMEs not very effective in the past (e.g. VND Loan program) and how will this be improved, especially when working with SMEs that have not much experience in working with the financial sector. How are SMEs currently connected to financial institutions, if at all?Fourthly, the two issues above point towards the need to evaluate the potential need within the SMEs and institutions for a clearinghouse for suppliers (e.g. technology, ESCO, financing) and customers (SMEs)? Integral to this question is the evaluation of the proper institutional location of such a clearinghouse to ensure long-term sustainability and effectiveness. The proposal provides for the development of a SME Energy Use Database. It is unclear what the purpose of this effort is and who the users will be, or what will be collected. However, such a database may become a powerful instrument as designed as part of a long-term dissemination strategy and clearinghouse. Hence, it is also recommended to design this effort properly to enable its use for improvement of the program *and* to sustain the program long-term.Fifthly, the overall effectiveness and efficiency of the program may need to improve to sustain the program. Because of high transaction costs, any energy-efficiency program with SMEs is likely to have higher costs than other industrial energy-efficiency programs. The specific costs of the program are hard to estimate due to the unclear savings potential (see discussion above). Part of the high costs is due to the demonstration programs and building of a policy, ESCO and SME-supporting infrastructure. Still, the program should search for effective ways to reduce the overall costs for future sustainability and replication.Finally, it is important to provide a sustained regulatory and policy framework for the program. The program may help to develop approaches that can successfully be adapted in to policies. The proposal provides for several ways to embed the program in a policymaking framework, which is an important factor for future success. The future integration and support should be included in the overall integration and management of the program as a separate item.Stakeholder InvolvementFrom the program proposal it is not possible to get a clear picture of the current level of organization within the industry on the regional and local level. To design the most effective and efficient communication and dissemination strategy it is important to use existing channels, as well as appropriate new networks. What kind of networks exist within the sectors? Are their local or regional clusters or networks of SMEs and are there links to financing, consultants, or other technology and service suppliers? In short, what is the best way to communicate with the SMEs, as this is unclear in the proposal; it just provides general information on communication methods and provides no evaluation of the relative effectiveness and efficiency. Hence, I believe it is key for the success of the program to develop the most efficient and effective communication tools that fit the characteristics of the sectors (SME, regional clustering (?), limited organization, low-tech and short on capital), and not to develop a separate or competing structure or organization. This needs a strong emphasis in the project and proposal.Other important elements of stakeholder involvement are the involvement of ESCOs (and to communicate the program and successes throughout this industry) and of other (international) programs in Vietnam focusing on SMEs. For example, the UN Cleaner Production Program aims specifically at the introduction of innovative practices and technologies for cleaner production in SMEs. Tapping into their experiences is essential to provide increased changes for success of the proposed program, and the proposal provides for different ways to achieve this. This is commended.Capacity BuildingThe proposal is strong on the element of capacity building. The embedding of the program in training provided by universities and colleges is a very good element of the program, especially to disseminate the results to a wider audience and to sustain the efforts beyond the five years of the program. The proposed program contributes to capacity building in the five industries, but very importantly, also in sectors of potential providers of services and technology to the SMEs (ESCOs, universities, banks, and technology suppliers). Given the informal character of the current SMEs, it is important to assess the current links between the institutes such as universities and colleges and SMEs. In industrialized countries SMEs have proven to be extremely important in innovation, they tend to have less access to R&D-capacity and universities. How is the link between these institutions and the emerging SME sector in Vietnam, and how can this link be forged for the success of energy-efficiency improvement.A relative small part of budget is reserved for training and information dissemination. The proposers may need to revise this as more information will become available on the most effective and efficient ways to transfer energy-efficient practices to SMEs in the five selected sectors.InnovativenessThe project contains non new or innovative technical or policy approaches persé, but the combination of the approaches in a single program focused at SMEs can be called innovative. Some of the elements seem riskier (e.g. the use of ESCOs for SMEs) than others, and a comprehensive approach as proposed may reduce these risks. |

**RESPONSES TO TECHNICAL REVIEW**

**VIETNAM: PROMOTING ENERGY CONSERVATION IN SMALL AND MEDIUM ENTERPRISES (PECSME)**

| **Comments and Responses** | **Reference** |
| --- | --- |
| Summary and General Review |
| **Comment**:*There is a need for overall integration of the different components to make sure that all synergies are utilized.***Response**: Overall integration of components is a key factor in overall project design although necessarily particular components/activities are addressed at overcoming particular individual barriers. The project components are indeed integrated in as much as the barriers to EC&EE in SMEs are interlinked. The Project Brief has updated to better articulate the synergies in the various Project Components/Activities.  |  |
| **Comment**: *The proposal needs to address a large number of details in the start-up of the project to ensure increased changes of success:* |
| 1. *Establish overall coordination of the project and management of the Components.*

**Response**: As mentioned in the Project Brief, the PMO and Project Advisory Board will be responsible for overall coordination and management of the project components. The Stakeholder Participation and Implementation Arrangements section in the Project Brief has been updated to make the overall co-ordination role and responsibility for the initiation and integration of the components and activities of the full-scale project by MOST more explicit. | Project Brief: Paragraph (Para) 114 to 120; and Executive Summary Section 5.c |
| 1. *Re-evaluate the position of the development of an energy-efficiency equipment industry and align with the overall project goals.*

**Response**:The development of an energy-efficiency equipment industry concept has been widened and more closely aligned with the overall project technical capacity building goals. The relevant activities’ emphases has been changed from a primarily local equipment manufacturing capacity development focus to the wider concept of localtechnical capacity enhancement in the full gamut of equipment manufacturing, importation, installation, maintenance, spares provision, support and refurbishment of energy efficient equipment. | Project Brief: Paras 97, 97e to 97.h; Annexes A and B; and Executive Summary: Annexes A and B |
| 1. *Design a communication and dissemination strategy tailored to each of the five selected sectors based on a detailed survey and analysis of the needs and ways of communication the five sectors.*

**Response**:Considerable initial survey work has already been undertaken on this issue during the PDF-B exercise in order to design Component 2. These findings show that the most effective ways to communicate with the SMEs and sector organizations is to set up a network that involves Departments of Sciences and Technology locally, sector associations, SMEs clusters (like network of VCCI, VCA), SMEs supporting agencies. Moreover, from the very beginning of the PECSME implementation, activities No 2.1 & 2.2 of Component 2 will involve the identification of relevant participating organizations, which will enable the re-evaluation of the most effective means of communication with the SMEs, and sector organizations.Considerable work in the PDF-B exercise was undertaken on communications and dissemination strategies and the findings of this work have now been made more explicit. A review step has been added in year 2 to refine this work in light of early project operational experiences. | Project Brief:Paras 95, 95.a and 95.b |
| 1. *Properly design an incentive and market structure to support a sustainable market for ESCOs for these SME-dominated sectors, if this proves to be an efficient mechanism for technology transfer.*

**Response**:The design of an incentive and market structure to support a sustainable market for Energy Efficiency Services Providers (EESPs) for these SME-dominated sectors has been included in Component 4. | Project Brief:Para 97.b |
| 1. *Focus the program not only on energy-efficient technologies but include improved management strategies and technologies in the training and other components of the program.*

**Response**: Training courses on energy management and operation for SME managers as well as for SME technicians have been included in the activity - Conduct of SME Training Courses.The improvement of technologies has been addressed through the activity - Technical Capacity Building for Local Equipment Manufacturers/Fabricators as well as in the activity - Design of a Sustainable EC&EE Research and Development Program.The improvement of management strategies of EESPs has also been addressed through the EESP training program as well as through the provision of technical assistance for EESPs.The language regarding the project’s focus on management and operational aspects as well as on technologies in the training and other components has been strengthened and made more consistent. | Project Brief:Paras 96.b and 97.a, g & h.  |
| 1. *Develop a clear framework and method for the (quantitative) evaluation of the overall project.*

**Response**: In order to ensure coherent, coordinated and timely implementation of project activities, practical mechanisms, monitoring and evaluation (M&E) procedures and implementation arrangements will be developed between and among national and local government agencies, financial institutions, private sector, local NGOs and community groups. Specifically, a M&E plan for the PECSME implementation will be developed together with the key stakeholders, and will be based on the identified success indicators and means of verification for the project goal, project purpose, project outcomes, and project activities. The Project Advisory Board will advise on, and approve the M&E plan. | Project Brief: Paras 138 and 139; Executive Summary: Section 3.e |
| 1. *Improve the sustainability of the program by embedding the financial aspects with long-term financial institutions, the technical aspects with energy service, technology suppliers as well as educational institutions, and the policy aspects with the proper agencies and ministries.*

**Response**: The sustainability of the project is a key factor in overall project design. In the project design, all project financial, technical, and policy aspects have already been embedded with relevant stakeholders in the existing institutional structure.* The project supplements the existing loan guarantee program of the Industrial and Commercial Bank of Vietnam (Incombank). Moreover, two existing environment funds, namely: the National Environment Protection Fund and the Pollution Mitigation Fund, will provide sustainable funding sources for EC&EE projects of SMEs.
* Energy efficiency service providers such as ECCs and existing EESPs and engineering companies will be the main target groups for the training and EESP development program.
* Technology suppliers like VINACEGLASS and local EC equipment suppliers will be involved in the technical capacity building program as well as in the design of a sustainable R&D program that is supported by Hanoi and Ho Chi Minh Universities of Technology as well as by sectoral research centers.
* Relevant central policy-makers like MPI (SMEPC and SMEDD), MOI, MOST and MOF as well as local policy makers like DOSTs and Peoples Committees will be involved in all activities of Component 1.

More explicit embedding of financial, technical and policy aspects with relevant stakeholders has been explicitly included in the Project Brief as suggested. | Project Brief:Paras 103 to 110  |
| 1. *Improve the presentation of the assessment of the benefits of the program in the proposal to enable improved evaluation and tracking of the success of the program.*

**Response**: The presentation of the assessment of the benefits of the project in the proposal has been revised.The national benefits of the project will be monitored, evaluated and tracked in an explicit program activity taking account of an international best practice M&E approach which is adequately resourced and which takes into account the full range of non-program factors that could also impact on changes in EC&EE in Vietnam’s SME sector. The Monitoring, Evaluation and Dissemination section text has been modified to make this more explicit. | Project Brief:Paras 87, 91 and 138, Annex E: Part E.3 |
| Scientific and Technical Soundness |
| **Comment**:*First component for the development of an infrastructure within the government and policy should also pay more attention to coordination of the other components. There are clear links between all the components that need to be addressed through integration and to make sure that the program benefits as a whole.***Response:** All six components of PECSME are linked and supported by each other. For example, the demonstration program is designed not only to demonstrate the EC&EE management, operational and technology improvements, but also to demonstrate how the project financing and EESP delivery mechanism operates, as well as to provide site training for SMEs. So project co-ordination and links between project’s components are recognized as being critical project success factors. Such coordination is the overall responsibility of the MOST as the executing agency for the overall project. As mentioned in the Project Brief MOST will establish a PMO and a Project Advisory Board, which will be responsible for overall coordination and management of the project components.  | Project Brief:Para 114 to 120;Executive Summary: Section 5.c. |
| **Comment**:*It seems that many of the components are internally consistent but need improved links to other components. There are many of such linkages, and the proposal needs to make sure that proper integration is covered as part of Component 1. Maybe, the proposers can add a diagram to show the linkages and how these are coordinated.***Response**: As mentioned in the Project Brief, the PMO and the Project Advisory Board will be responsible for overall coordination and management of the project components. The Stakeholder Participation and Implementation Arrangements section in the Project Brief has been updated to make the overall co-ordination role and responsibility for the initiation and integration of the components and activities of the full-scale project by MOST more explicit. | Project Brief): Paras 114 to 120; and Executive Summary Section 5.c |
| **Comment**:*Integrate the assessment and improvement of local service and technology suppliers (currently part of Component 3) to Component 4. This element needs a sound basis. While there is a clear need for an infrastructure that can assist the SMEs in procurement and development of appropriate technologies, I wonder if this should be developed in isolation. To make sure that this development will not result in the dissemination of inefficient and outdated practices, the development of such an industry should be seen as part of wider energy services industry, that includes the ESCOs, energy conservation centers, existing universities and colleges, as well as technology suppliers (and importers) currently active in Vietnam.***Response**: The assessment and improvement of local energy service and technology suppliers has been moved from Component 3 to Component 4 as suggested as it is a better fit with the development of the full range of energy efficiency services for SMEs. | Project Brief:Paras 97e to 97.h; Annex A: Para 24;and Annex B: Items 4.5-4.8 |
| **Comment**:*The development of a domestic industry for the development, construction and maintenance of industrial equipment should not be a goal of an energy-efficiency potential persé. By connecting it more clearly to the energy-efficiency “industry” it may ensure a stronger focus on energy efficiency.***Response**: The Project Brief has been modified to ensure that the provision of enhanced local capacity in the supply of energy efficiency equipment is now just one component among many integrated activities in the development of the full range of energy efficiency services required to improve EC&EE in the SME sector in Vietnam. Supporting a wider domestic equipment industry was never an intention of the project as distinct from SME EC&EE aspects. As mentioned in Component 3 of the Project Brief, the focus is only on the technical capacity of local suppliers who are providing EC&EE equipment identified as relevant EC&EE technologies for the Demonstration Program under the PECSME project .  | Project Brief:Paras 97; 97.e to 97.h, Annex A: Para 24; and Annex B: Item 4.5 to 4.8 |
| **Comment**:*As with any program, of such proportions, the “devil is in the details”. For example, a number of questions that come up when reviewing the proposal are (in no specific order): (1) how to select SMEs for training? (2) how to integrate formal training with a typically more informal sector? (3) how are audits connected to other elements (e.g. training, financing) of the program? how is a R&D program connected to the SME sector needs, university, training, as well as foreign technology developments? (4) how is an ESCO market (or service supplier) connected to suppliers and SMEs? (5) Distribution of projects (appendix E) is skewed towards brick and ceramics - why so few in pulp & paper, which is also a large energy user?***Response**:The need to deal with the myriad details in a project of this type with its many components and activities is recognized in the project design where the general approach utilized in each project component is to have explicit early establishment phases where the outputs of these phases then provides the necessary practical design refinements into subsequent phases. This is seen as being more effective than trying to design all activities in great detail at this point and thus lock the project into design details that may prove to be inappropriate once project implementation feedback becomes available. However, the components and activities have been reviewed and further details added as appropriate, and the general approach to be followed has been expanded upon in the Rationale section of the Project Brief. | Project Brief: Para 81 |
| **Comment**:*While the proposal refers to the PDF-B document for the technical documentation of the proposal, the proposal would benefit if it would briefly describe the criteria used to select the sectors and how much these sectors contribute to the economy, and how they are expected to develop economically and technically in the future? Furthermore, are there regional clusters of specific industries, which may provide an avenue to improved dissemination strategies.***Response**: The SME sectors included in PECSME were chosen on the basis of their magnitude of energy use, their identified energy conservation potentials, and their use of common industrial technologies such that demonstration projects in these sectors would be likely to be broadly applicable for further replication amongst other SMEs.The overview of economic and technical development of the five selected SME sub-sectors has been included in Annex E as suggested by the STAP Reviewer.  | Project Brief: Para 83 and Annex E:Part E.1;  |
| **Comment**:*The current proposal provides some estimates of the relative energy conservation potential within each sector (p.10), but does not clarify how this was defined (e.g. technical, economic, what payback criteria) and how it was determined.***Response**:The energy conservation potentials within each sector were based on energy audits within representative SME demo sites and the energy conservation potentials used were economic energy conservation potentials with payback periods of 3.6 years or less - and as such represent realistic demonstration measures that can be expected to be widely replicated. This information has been added in Annex E. | Project Brief:Annex E:Part E.3 & E.4Table E-6, E-8, and E-9. |
| **Comment**:*In appendix E the proposal provides some information on selected technologies and overall expected energy savings. Without further information it is hard to evaluate the selection of energy efficiency measures, the likely energy savings, and costs of implementation (and hence funding and loan guarantee funds).***Response**: The measures selected were based on the: (a) Results of past energy audit reports undertaken in order to develop the Master plan on EC&EE by MOSTE and energy audits carried out during the PDF-B exercise; (b) Results of a Small-Grant GEF project on demonstration of the Replacement of Traditional Kilns with Vertical Shaft Brick Kilns; (c) Results of the assessment of appropriate EC&EE management, operation and technology options for the five SME sub-sectors carried out by IHERE.The total required investment for the demonstration projects is approximately VND 275 billion (US$ 18 million) with individual SME investments ranging from VND 60 to 1,000 million. The calculated payback period for pipeline projects is in the range of 0.3 to 3.6 years. The information on the expected energy savings and costs of implementation have been added to part E.4 of Annex E. | Project Brief: Annex A: Paras 27 & 28;Annex E:Part E.3 & E.4,Table E-6, E-8, and E-9. |
| **Comment**:*The evaluation of the potential for energy efficiency improvement is very unclear. It remains unclear how the expected energy savings are linked to the selected measures and to the individual sectors. The PDF-B may contain this information, but it would be good if this information would also be summarized in the current proposal or an appendix.***Response**: All the relevant information have been included in Annex E in the Project Brief. | Project Brief:Annex E:Table E-7, E-8, and E-9. |
| **Comment**:*The proposal does not contain any data on economic, environmental and product quality issues of the sectors. This is not only important to evaluate the co-benefits of the proposed program, but also to evaluate the most successful direction and implementation of the proposed program, as well as evaluate the sustainability of the program in the long term.***Response**: The overview of the economic and technical development of the 5 selected SME sub-sectors have been added as one part of Annex E as suggested by the Reviewer. | Project Brief:Annex E:Part E.1 |
| **Comment**:*While the proposal contains an adequate discussion on the general barriers for energy-efficiency improvement for SMEs, it would be good to assess the main barriers for each of the selected sectors and how this affects the detailed design of policy approaches to ensure efficiency and effectiveness.* **Response**: Reviewing the barriers as detailed in the Project Brief’s “Barriers” section reveals that the barriers apply equally to all the SME sub-sectors. Furthermore, the variations between SME’s within any one sector are at least as large as the variations between sectors.  | Project Brief:Para 79 |
| **Comment**:*Given the lack of specialized personnel and relative low level of formal training within SMEs, training in ‘best practice’ management strategies and practices would be an important item to add to the program. The proposals to develop an infrastructure for continuous learning through the establishment of training courses on universities and through development of a network of energy service and technology suppliers are great and innovative. However, key to the success is the establishment of an effective communication strategy embedded in the environment in which each of the five sectors work.***Response**: The PDF-B Training Sub-Contract Team’s work revealed that the SME’s were primarily interested in short 1 – 3 day local training courses rather than longer formal training. The need for training in “best practice” management strategies and practices is a necessary element of PECSME primarily as a requirement in “training the trainers”. References to these points have been strengthened in the Project Brief in Activities 3.a through 3.d (Component 3). Work on the establishment of an effective communications strategy has been significantly advanced in the PD-F Exercise and further work on this has been added in a new explicit activity under Component 2. | Project Brief: Para 95.a, 96.a to 96.dAnnex B: Item 3.2 |
| **Comment**:*Also, the proposal notes that SMEs often lack knowledge on the supportive policies available to SMEs, but it does not provide a clear approach to ensure that the proposed program will not suffer from the same barrier. More generally, this issue reflects the manner and methods that SMEs in Vietnam use to collect information on technology and services (including financial). Are the proposed dissemination strategies (e.g. website, leaflets, etc.) most effective, or are other strategies more effective in sector that is currently defined by a large informal organization, if any organization at all. Again, detailed analysis at the start of the project will help to design such an effective communication and dissemination strategy.***Response**: The Policy Group and other groups have carried out considerable work on these necessary supportive policy issues during the PDF-B exercise. This work identified that the problems in this area were largely due to the government agencies involved lacking capacity in the implementation of existing policies rather than the lack of appropriate policies.Considerable work was also undertaken on identifying and analyzing the full range of available communications media and channels. The Vietnam Energy Conservation Program (VECP) has successfully utilized the communications media and channels to similar audiences in previous projects. A formal Communications and Dissemination Strategy will be identified by various project surveys under Activity 2.c (Component 2) to explicitly address this issue. | Project Brief:Paras 94, 94.a, and 95.a |
| **Comment**:*Hence, I propose that a detailed survey and analysis of the barriers and most effective ways to communicate with the SMEs and sector organizations, disseminate the results, improve access to services, technology and funding in the selected five sectors, is done in the very beginning of the project. This would ensure improved changes of success. Again, part of this information may be contained in the PDF-B document, but the generalized discussion in the current proposal does not allow evaluation of the specific needs and services needed for the five selected sectors.***Response**: An initial survey on this issue has already been undertaken during the PDF-B exercise in order to design Component 2. The findings show that the most effective means to communicate with the SMEs and sector organizations is to set up a network that involves the local Departments of Sciences and Technology, sector associations, SMEs clusters (such as the networks of VCCI and VCA), and SME supporting agencies. From the start of the PECSME implementation, Activities 2.a & 2.b (Component 2) will involve the identification of relevant participating organizations, which will re-evaluate the most effective ways of communication with the SMEs, and sector organizations. More detailed reference to the survey and analysis work undertaken in the PDF-B exercise has been added to the Project Brief and Executive Summary. | Project Brief:Paras 95, 95.a & 95.b |
| **Comment**:*Given that the largest part of the funding comes from the private sector (i.e. for investments in energy-efficient equipment), how is this guaranteed? Who are the main players? Experience with SMEs in China (the former Township and Village Enterprises) has shown that some can rapidly develop in larger enterprises with substantial financial ability to invest. However, it is unclear if the Chinese experience is a good comparison for Vietnam. Also, how are the demonstration projects integrated with the ESCOs and trainings. Can the small sector of energy conservation centers/ESCOs provide $400,000?***Response**:The China TVE Project has considerable similarities with the Vietnam PECSME project and the results and experiences from the China TVE project have been drawn on in the design of Vietnam PECSME. The scale and breadth of private sector co-financing commitments, and their strong involvement in the demonstration projects, the growth of an energy efficiency services provision industry and the inclusion of considerable training provision activities, serves to guarantee the necessary integration. The Letters of Commitment that will be submitted along with the Project Brief shows that the identified co-financing is guaranteed. An M&E plan will be developed and employed to keep track of the activities (and indirectly the expenditures) that will be carried out by the project partners. The main players include: (1) Industrial and Commercial Bank of Vietnam (Incombank), one of the State Owned Banks in Vietnam that has a nationwide network that provides financing to SMEs; (2) Vietnam Ceramic and Glass Corporation, which has been producing the LPG-Fired Kilns for ceramic production, has committed to supply and financing for LPG-Fired Kilns for SMEs under the PECSME project; and, (3) Energy Conservation Centers, which are local state agencies belonging to Provincial DOSTs and which are funded by local and central government so their commitment to full-scale project co-funding can be relied upon. The development of a suitable formal M&E plan has been made more explicit in the Monitoring, Evaluation and Dissemination section of the Project Brief. | Project Brief:Paras 111, 138.Annex A:Paras 31 & 32 |
| **Global Environmental Benefits (and Drawbacks)** |
| **Comment**:*The proposal does not provide an understandable estimate of the overall direct energy savings and GHG mitigation potential from the proposed program and estimates of the indirect savings due to dissemination and replication throughout the five sectors. The provided estimates seem reasonable on first impression. From the presented data of the PDF-B document it seems that detailed assessments have been made. However, it is unclear from the current proposal how the estimates of potential savings are based on the selected measures and improved energy management practices, and how penetration rates affect the results.***Response**: It is forecast that when all energy saving measures are implemented in 20% of SMEs in these 5 major SME sub-sectors by the end 2015, the average annual energy savings would be 189.5 ktoe and an average 1,004.2 ktonnes CO2 would be reduced annually during 2005-2015. The cumulative energy saving would be 1,895.4 ktoe and the cumulative CO2 reduction would be 10,042 ktonnes by 2015. At the GEF incremental cost of US$ 5,469,000, the cost of avoided CO2 emissions would be approximately US$ 0.5 per tonne. If the EC&EE measures and techniques demonstrated in the five PECSME SME sectors were to be introduced by SMEs cross all sectors, the potential CO2 emission reductions would be 1.5 million tonnes per year (according the Master Plan on EC&EE of MOST). | Project Brief: Para 87;Annex E:Part E.3 |
| **Comment**:*In the current Appendix E there are some inconsistencies, for example, in the text (p.81) total energy savings of 175.4 ktoe by 2015 are given, but in Table E-2, the 2015 energy savings are estimated 336.4 ktoe. Which one has been used by the proposers? A more detailed discussion would make a stronger case.***Response**: The necessary corrections have been made in Annex E, with detailed discussion added on how the figures were derived. | Annex E:Part E.3 |
| **Comment**:*Electricity savings are only expressed in final energy. This leads to an underestimate of the total primary fuel savings that will be achieved.***Response**: The necessary correction has been made. The project electricity savings have been converted into primary fuel and CO2 savings using the average heat rate based on the average projected power generation mix in Vietnam. | Annex E:Part E.5 |
| Other Environmental Benefits |
| **Comment**:*The proposal does not estimate other environmental benefits of the improvements in energy-efficiency. This is unfortunate, as these savings will be very important for local air pollution (e.g. SOx, NOx, and PM) reduction. Although the GEF Operational Strategy focuses on climate change, these improvements in local and regional air quality are very important for local support of the program. Furthermore, improvements in working conditions and employee health are important co-benefits.***Response**: The improvement of energy efficiency achieved from the project will leads to significantly reduced local air pollution (SOx, NOx, and particulates) since large quantities of coal are currently used in the five sectors, particular in the brick and ceramic sectors. In addition, improvements in working conditions and employee health are important co-benefits. These other benefits have therefore been added in the National Benefits section. Elaboration of these local benefits has also been added in the discussion of National Benefits. | Project Brief:Paras 91;Annex E: Table E-4. |
| Evaluation |
| **Comment**:*The proposal provides for evaluation of the training program, the effectiveness of financing mechanisms, and the demonstration program. There is also a clear need for a quantitative evaluation of the total program results. The proposal does not provide any methods for evaluation. While it is hard to quantitatively evaluate program elements such as dissemination and stakeholder participation, it is important to measure those elements that can be quantified, e.g. achieved energy savings of the demonstration projects, sales of the technologies that are proposed and the effects of the proposed energy service companies. For this purposes the proposers should develop a clear protocol, possibly following the International Monitoring and Verification Protocol (IPMVP). Furthermore, it is advised to have the evaluation done by an independent organization to ensure unbiased results.***Response**: As detailed in the response to a previous reviewer comment, the IPMVP methodology will be referred to and the general IPMVP approach will be followed in the full-scale project’s Monitoring and Evaluation (M&E), including the quantification of the total program results. A clear M&E Plan will be formulated as part of the project Annual Work Plan at the inception phase of the full-scale project. Suitable M&E activities will be undertaken and reported on in the independent mid-term and final project evaluations to ensure unbiased results. Appropriate changes to the Project Brief and Executive Summary texts have been made to clarify and articulate these important issues. | Project Brief: Paras 138 to 140; and Executive Summary section 3. e |
| Replicability |
| **Comment**:*A dissemination approach is developed to reach out to the SMEs and a future energy service and technology suppliers industry. The expected growth of the five selected industries would provide ample potential for replication. Further replication outside of the concepts developed, and especially the combination of a number of approaches for barrier removal may be replicable in other sectors dominated by SMEs in countries in the region.***Response**: A successful project can be expected to have a positive replication impact on sectors outside the chosen five SME sectors given the commonality of relevant energy conservation measures and the involvement of common key change agents such as the Energy Conservation Centers and Technical Universities and Institutes. By building on existing links with other countries in the region, it is envisaged that lessons learned in PECSME can be replicated in their SME sectors as well. | Project Brief: Para 110; and Executive Summary Section 3.c |
| Sustainability |
| **Comment**:*The sustainability of the proposed program will depend on the establishment of networks and an organizational structure that can survive without additional international funding after 5 years. The likelihood will depend on the effectiveness and efficiency of the program in reaching out to the SMEs, providing a sustaining infrastructure for energy service and technology suppliers, continued education, achieving cost reductions for SMEs, while demonstrating the overall gains for the Vietnamese economy and (global) environment.***Response**: The need to establish activities that are sustaining after the completion of the five-year PECSME project is recognized in the project design. In particular, there is a strong emphasis on capacity building and facilitation of utilization of existing but underutilized environmental funding sources as durable mechanisms that will remain effective after the project’s completion. | Project Brief:Paras 104 to 107 |
| **Comment**:*How can the proposed initiative for energy-efficiency improvement in SMEs build on the existing SME-infrastructure (e.g. SMEDD, SMEPC, Credit Guarantee Fund), and where advisable, be integrated, to ensure long-term interest in energy-efficiency improvement within the five sectors, and a sustainable implementation and dissemination infrastructure, as well as policy integration after the five-year project?***Response**:The PECSME project is designed to utilize existing SME infrastructure support elements so that maximum progress can be achieved in the five-year project duration and so that there is the greatest possible likelihood of activities continuing after project completion. It is envisaged that other activities such as energy efficiency standards which are being supported under PECSME will make their contribution near the end of the project and continue making an impact after the project, as they are activities that intrinsically take longer to make a measurable impact due to stock turnover. All organizations in the existing SME–infrastructure such as SMEDD, SMEPC and policy-making agencies related to EC&EE will be involved in the project implementation through all activities in the component 1 that focus on building up their capacity and integrating EC&EE in the exist systems supporting SMEs in Vietnam (see activities 1.a and 1.c in Component 1 in the Brief). The revised text to reflect this issue has been included in the Project Brief. | Project Brief:Paras 45, 47, and 103-107.  |
| **Comment**:*The sustainability of the ESCO market for industry in Vietnam is an uncertainty factor. Worldwide, ESCO-activity in industry has been limited, and experience relatively recent. It is unclear from the proposal what the ESCO-experience is in Vietnam, especially with SMEs. This may need more research at the beginning of the project, to identify the most effective and successful ways to improve collaboration between ESCOs and SMEs. Is there ESCO experience in Vietnam? SMEs seem a risky market for ESCOs with high transaction costs, how to make this sustainable? Can the program learn from international experiences?***Response**: During the PDF-B exercise, a survey to evaluate the EESP (Energy Efficiency Services Provision) experience in Vietnam was carried out to design the Energy Efficiency Services Provision Support Program of the project. The findings show that there are some existing agencies operating as EESPs in Vietnam namely: energy conservation centers, Enerteam, engineering companies. These organizations have been providing energy efficiency services to a range of enterprises including to SMEs. In the PECSME strategy, these organizations will be the key players participating in the program. As regards ESCOs, what is envisaged under the PECSME project is support for a wider range of energy efficiency services support industry functions, including (but not limited) to traditional ESCO activities. The program builds on international experiences with traditional ESCOs in not exclusively relying on them as the sole model and driver of EC&EE activities. No traditional ESCOs are yet in place in Vietnam, and although the project will foster ESCO activities alongside broader EESP activities, the PDF-B Exercise work showed that it would be premature to expect full-blown ESCOs to make a major impact during the PECSME project operation given the early stage of market development currently in Vietnam. The language in the Project Brief and Executive Summary has been adjusted accordingly to clarify that a much wider energy efficiency services provision industry concept is being supported than just traditional ESCO services with their high transaction costs relative to the general small size of Vietnam’s SMEs. | Project Brief: Paras 97, 111; and Executive Summary: Section 3.a and Annex B: Item 4. |
| **Comment**:*A third component to ensure long-term sustainability of the program focuses on the financial support of energy-efficiency investments. The program needs to learn from past experiences to develop a financial infrastructure for energy-efficiency (e.g. show to banks that energy-efficiency is a sound and bankable investment) and SMEs (e.g. demonstrate the importance of proper financing of technologies with high upfront costs to ensure long-term business success). Are there any experiences with loan guarantee funds for SMEs (and the sustainability thereof) in Vietnam? Why were some of the financial support programs for SMEs not very effective in the past (e.g. VND Loan program) and how will this be improved, especially when working with SMEs that have not much experience in working with the financial sector. How are SMEs currently connected to financial institutions, if at all?***Response**: Based on the findings of the Financial Subcontractor Team during the PDF-B Exercise, there are existing loan guarantee funds (LGFs) in Vietnam that assist SMEs in accessing commercial loans. The legal framework for these kinds of funds has already been set up, and some of the banking/financial institutions in the country are involved in their operation. These include Industrial and Commercial Bank of Vietnam (Incombank) and the Development Assistance Fund. PECSME intends to supplement one of these existing funds to further support the EC&EE projects of the SMEs. The Incombank was selected as PECSME partner on this for the following reasons: a) The Credit Guarantee Fund (CGF), which is part of the Vietnam–Germany Credit Program, has been developed and implemented by INCOMBANK for the past 10 years; and, b) Incombank has a suitable nationwide network that provides loans to industrial SMEs in all provinces. The Credit Guarantee Fund (CGF) is intended to provide guarantees for SME borrowers who are short of collateral to obtain commercial bank credit. Up till end 2002, INCOMBANK has financed 4,018 projects with total amount of US$ 44 million lent. Based on its successful experience in promoting SME development, GOV has issued decision to establish the credit guarantee fund in the provinces.Some of the financial support programs for SMEs have not been very effective in the past because they also request SME borrowers to guarantee the collateral in order to provide loan for SMEs. All activities in Component 5 aim to improve the effectiveness of the financial support programs for SMEs. | Project Brief: Para 111.Part of Financial and banking institutions |
| **Comment**:*The two issues above point towards the need to evaluate the potential need within the SMEs and institutions for a clearinghouse for suppliers (e.g. technology, ESCO, financing) and customers (SMEs). Integral to this question is the evaluation of the proper institutional location of such a clearinghouse to ensure long-term sustainability and effectiveness. The proposal provides for the development of a SME Energy Use Database. It is unclear what the purpose of this effort is and who the users will be, or what will be collected. However, such a database may become a powerful instrument as designed as part of a long-term dissemination strategy and clearinghouse. Hence, it is also recommended to design this effort properly to enable its use for improvement of the program and to sustain the program long-term.***Response**:The SME energy use database will be used by SMEs, suppliers and researchers for the following purposes: 1) designing long–term activities: 1.c (Component 1), 3.c (Component 3) and 4.h (Component 4); and, (2) Developing the business plans of EESPs and EC&EE equipment suppliers.The PDF-B Exercise examined very closely the institutional settings and mechanisms for SME support and EC&EE improvement in Vietnam. This work revealed that a number of different agencies have responsibilities for different aspects of SME development, promotion and support. However, a very important finding of this institutional analysis was that the various government ministries and agencies seemed to be broadly aware of each other role, and mechanisms such as SMEPC were already in place to co-ordinate efforts between the around 23 ministries and agencies involved. Given the number of ministries and agencies involved, a central clearinghouse and strategy would be unlikely to be a viable option, as it appears unlikely that any one agency could obtain the mandate and dominance over other agencies for such a centralized approach to be successful. Rather, coordinated efforts between different activities led by different agencies is included in the PECSME design, as it was shown to be a more promising way forward. The SME Energy Use Database thus has a more limited role than that perhaps envisaged by the reviewer | Project Brief: Para 95.d. |
| **Comment**:*The overall effectiveness and efficiency of the program may need to improve to sustain the program. Because of high transaction costs, any energy-efficiency program with SMEs is likely to have higher costs than other industrial energy-efficiency programs. The specific costs of the program are hard to estimate due to the unclear savings potential (see discussion above). Part of the high costs is due to the demonstration programs and building of a policy, ESCO and SME-supporting infrastructure. Still, the program should search for effective ways to reduce the overall costs for future sustainability and replication.***Response**: The recalculation presented in Annex E shows that the average annual energy saving would be 189.5 ktoe and an average 1,004.2 ktonnes of CO2 would be reduced annually during 2005-2015. The cumulative energy saving would be 1,895.4 ktoe and the cumulative CO2 reduction would be 10,042 ktonnes by 2015. At the GEF incremental cost of US$ 5,469,000, the cost of avoided CO2 emission would be approximately US$ 0.5 per tonne. If the EC&EE measures introduced by PECSME were replicated in SMEs across all SME sectors, the potential CO2 emission reduction would be 1.5 million tonnes per year. | Project Brief:Annex EPart E.3. |
| **Comment**:*It is important to provide a sustained regulatory and policy framework for the program. The program may help to develop approaches that can successfully be adapted in to policies. The proposal provides for several ways to embed the program in a policymaking framework, which is an important factor for future success. The future integration and support should be included in the overall integration and management of the program as a separate item.***Response**: The work under the PDF-B Exercise in the Policy area revealed that Vietnam already has many relevant SME supportive policies. With the signing of the EC&EE Decree by the Prime Minister, Vietnam now has most of the necessary underlying fundamental policy framework in place for EC&EE promotion, including for SME’s. The PDF-B Exercise showed clearly that the critical need was now less towards the development of even more policies, but rather for the capacity building necessary so that the many existing policies could be translated into tangible regulatory and supportive actions. It should also be noted that polices can take a very long time to develop and then can take even longer to implement, so little tangible would be likely to be achieved from any new policies within the five year timeframe of the full-scale PECSME Project.The Advisory Board, which will involve relevant policy-makers and institutions for supporting EC&EE in SME, will be established under the PECSME project that can ensure the future integration and support for this sector. | Project Brief: Paras 42 to 48, 94.b and 114, 115;Executive Summary Section 2.b |
| Stakeholder Involvement |
| **Comment**:*From the program proposal it is not possible to get a clear picture of the current level of organization within the industry on the regional and local level. To design the most effective and efficient communication and dissemination strategy it is important to use existing channels, as well as appropriate new networks. What kind of networks exists within the sectors? Are their local or regional clusters or networks of SMEs and are there links to financing, consultants, or other technology and service suppliers? In short, what is the best way to communicate with the SMEs, as this is unclear in the proposal; it just provides general information on communication methods and provides no evaluation of the relative effectiveness and efficiency.***Response**:The key stakeholders of the project are the many local organizations and sector associations which are close to SMEs and that can communicate efficiently with SMEs, such as: ECCs under DOSTs in provinces; VCCI and VCA, which have branches in almost all cities/provinces, companies and Universities etc that are currently providing technical support to SMEs; and sector associations (e.g., Bat Trang Ceramic Association). The PDF-B Exercise showed that the best way to communicate with SMEs is to utilize existing channels, for example: through DOSTs in provinces (using their ECCs as focal points) as well as the existing SME support associations such as VCCI, VCA and sector associations. Since the DOSTs are responsible for supporting technology transfer to enterprises in their local areas, they have the necessary close linkages with technology universities and technology suppliers as well. | Project Brief:Paras 95, 111 |
| **Comment**:*It is key for the success of the program to develop the most efficient and effective communication tools that fit the characteristics of the sectors (SME, regional clustering (?), limited organization, low-tech and short on capital), and not to develop a separate or competing structure or organization. This needs a strong emphasis in the project and proposal.***Response**:Within the five SME sub-sectors, the project utilizes all available industry networks (such as ceramics associations in traditional ceramics villages) that exist at a regional level. The project also utilizes all existing national means to communicate with SMEs such as VCCI, VCA and the Vietnam Womens Union. It is proposed in the full-scale project that a mix of all the available regional and national means of communications with SMEs be utilized, rather than just relying on a regional or national only approach using just one communications channel. The design of Component 2 has been updated. | Project Brief: Paras 95, 95.a; and Executive Summary Section 3.d |
| **Comment**:*Other important elements of stakeholder involvement are the involvement of ESCOs (and to communicate the program and successes throughout this industry) and of other (international) programs in Vietnam focusing on SMEs. For example, the UN Cleaner Production Program aims specifically at the introduction of innovative practices and technologies for cleaner production in SMEs. Tapping into their experiences is essential to provide increased changes for success of the proposed program, and the proposal provides for different ways to achieve this. This is commended.***Response**:The proposal envisages strong links with other international programs in Vietnam, in particular cleaner production, and EC&EE for SMEs. This is also reflected in the utilization of existing development and environmental funds in PECSME, rather than in the establishment of any new separate EC&EE funds. These envisaged strong links with other programs have been further detailed in the Project Brief and Executive Summary. | Project Brief: Paras 98.c, 98.d, 112; Executive Summary Section 3.d |
| Capacity Building |
| **Comment**:*Given the informal character of the current SMEs, it is important to assess the current links between the institutes such as universities and colleges and SMEs. In industrialized countries SMEs have proven to be extremely important in innovation, they tend to have less access to R&D-capacity and universities. How is the link between these institutions and the emerging SME sector in Vietnam, and how can this link be forged for the success of energy-efficiency improvement.***Response**:The key role that SMEs are expected to play in driving further necessary innovation, whilst at the same time recognizing their limited access to R&D-capacity and Universities, is intrinsic in the PECSME program design. The strong local and regional links between training providers and SMEs will go some way to resolving this dichotomy. The fostering of links between R&D and technology providers and SMEs has been made more explicit in the Project Brief.The Technical Universities and Colleges involved in the PECSME project will play a key role by the development of sustainable energy conservation programs in their engineering curricula as well as for development of a suitable R&D program. The Technical Universities and Colleges will also provide important Provincial level technical support networks that will provide technical assistance for SMEs in implementing EC&EE. | Project Brief: Paras94.d, 96.c & 97.h |
| **Comment**:*A relative small part of budget is reserved for training and information dissemination. The proposes may need to revise this as more information will become available on the most effective and efficient ways to transfer energy-efficient practices to SMEs in the five selected sectors.***Response**:Capacity building is one of the key means in the project to facilitate energy efficiency barrier removal. The budgets devoted to training and information dissemination are the second and third largest additional cost budgets by component after the financing program. After reviewing these budgets and their respective size compared with other components and activities, it is felt that these budget are adequate in both absolute and relative terms.  | Project Brief: Para 132 – Table 1 |
| Innovativeness |
| **Comment**:*The project contains non-new or innovative technical or policy approaches persé, but the combination of the approaches in a single program focused at SMEs can be called innovative. Some of the elements seem riskier (e.g. the use of ESCOs for SMEs) than others, and a comprehensive approach as proposed may reduce these risks.***Response**:The overall project is pleased to be able to utilize proven technical and policy approaches in what is recognized by the reviewer as an integrated single program. Strong efforts have been made to reduce the risk in all the elements, including not relying on traditional ESCOs for undertaking all of the necessary EC&EE investments in SMEs, but rather to foster the full range of energy efficiency services providers (EESPs), which will include ESCOs as appropriate but will not exclusively rely on any such ESCOs being formed or playing a dominant role. | Project Brief: Para 97 |

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