

PERU
DEVELOPMENT OF A SUSTAINABLE MARKET FOR SERVICES TO PROMOTE
EFFICIENT ENERGY PRODUCTION AND USE IN THE INDUSTRIAL SECTOR

(TC-98-11-01-4)

EXECUTIVE SUMMARY

Executing agency:	Sociedad Nacional de Minería, Petróleo y Energía [National Mining, Petroleum and Energy Association] (SNMPE)
Beneficiaries:	Energy users in the productive sectors, who will receive energy services, and small and medium-sized enterprises (SMEs) currently providing energy services or with the potential to do so. Approximately 30 SMEs have been identified as potential suppliers of such services in Peru.
Objectives:	<p>The general objective of this technical cooperation is to strengthen the market supply of energy services through the provision of technical and financial training and business development services. At the same time, the project will encourage demand for this type of services through promotional activities targeted at industries with the highest energy intensity indices.</p> <p>The specific objectives are: (i) to enhance the management capacity of energy service providers so they can develop, market and provide efficient and sustainable energy services; (ii) to strengthen the capacity of financial institutions to work with new financial and contractual arrangements for efficient energy production and use (EEPU)¹ projects; (iii) to promote EEPU among energy consumers; and (iv) to sponsor pilot projects to demonstrate the commercial, technical, financial and legal feasibility of EEPU and to test the effectiveness of the tools developed in other components.</p>
Description:	This technical cooperation seeks to create a market for energy services through a strategy to strengthen the supply of, and stimulate the demand for, energy services in the Peruvian industrial sector, which has a relatively high energy intensity and is the principal consumer of electricity in the country and the second consumer of energy overall. It will help to improve the competitiveness and productivity of the

¹ Efficient energy production and use (EEPU) implies the implementation of measures that reduce energy consumption in equipment, processes and facilities and the generation (production) of electric or thermal energy with higher efficiency indices and lower emissions.

country's industrial sector and allow it to meet domestic and external competition in the face of market globalization.

Energy services are those technical and commercial services which seek to reduce energy use and costs to users. These services are furnished by specialized companies, which perform assessments and devise measures to produce savings. They raise financing, install and maintain energy efficient equipment, and monitor and verify the savings produced.

The supply of energy services in support of EEPU projects has been limited by the lack of suitable business models for responding to existing market opportunities. Efforts are needed therefore to strengthen energy service providers, or create new ones, generally SMEs, by offering new techniques, ESCO²-type business models, and new financing formulas.

In terms of demand, there is a confirmed latent demand for energy services that has gone unmet because of a number of barriers, in particular the need for wider promotion and better access to financing for projects of this type. A major promotional effort for such services among industries and industry associations could enhance customer confidence and interest and therefore increase the demand for services.

To stimulate both the demand for services and the capacity to provide them, as well as to achieve the specific objectives proposed, this technical cooperation has four components: (1) training for energy service providers; (2) development of innovative financial mechanisms; (3) technical assistance for pilot projects; and (4) promotion of energy services.

The first component aims to strengthen the management capacity of SMEs providing energy services, while the second component will identify and develop financial instruments to improve access to SMEs financing. The remaining components are intended to strengthen demand through promotional activities and the launching of pilot projects to demonstrate the economic and environmental benefits of the EEPU approach.

Cost and financing:	MIF	US\$1,190,000
	Local counterpart:	<u>US\$ 800,000</u>
	Total:	US\$1,990,000

² "Energy Service Companies" (ESCO) undertake EEPU projects under contracts whereby they are remunerated in accordance with the energy savings they achieve.

Execution timetable:	Execution period: 36 months Disbursement period: 42 months
Environmental and social considerations:	The components involving training and assistance for pilot projects will take occupational health and environmental aspects into account. As well, assistance for structuring pilot projects will include, where appropriate, the definition of environmental indicators. Establishing an energy services market will generate positive environmental impacts through an eventual drop in emissions of pollutants and greenhouse gases, thanks to greater efficiency in energy production and use and in the use of natural resources. Moreover, the EEPUs projects are expected eventually to produce better management of productive inputs and therefore to reduce emission levels of industrial pollutants.
Special contractual clauses:	Prior to the first disbursement, the project execution unit (PEU) must be fully operational within the SNMPE and the plan of activities for year one of execution must have been defined (paragraph 4.2).

I. COUNTRY AND PROJECT ELIGIBILITY

- 1.1 On 14 December 1983, the Donors Committee of the Multilateral Investment Fund (MIF) declared Peru eligible for all forms of financing, on the basis of a country eligibility memorandum prepared by the Bank. The proposed project meets the eligibility criteria for a grant under the Human Resources Facility.

II. BACKGROUND

A. Modernizing the Peruvian economy

- 2.1 In 1991 the Peruvian government initiated a process of transition from an economy in which the State had a significant involvement in business activities, towards a market economy in which the private sector would play a more important role in the country's development. As a result of this change, the Government of Peru has achieved in-depth reforms in the energy, financial, industrial and other sectors.
- 2.2 Energy sector reforms include the deregulation of fuel prices and electricity tariffs and the elimination of all classes of subsidies; amendments to hydrocarbons legislation to allow private investment; promulgation of the Electricity Concessions Act, under which the national electric sector is now managed with private sector participation. As well, the restructuring of the electricity sector included separating the activities of generating, transmission and distribution companies, the recognition of "free client" status for major consumers, primarily industries, which thereby gained the ability to negotiate tariffs with generating and distribution companies; promotion of competition, and the transfer to the private sector of, to date, nearly half of the country's installed generating capacity and two-thirds of distribution, which previously belonged to the public sector.
- 2.3 As the State withdraws from ownership and control over the means of producing and supplying energy, its role must shift from direct execution of projects to facilitating and promoting a market for energy services, in which the private sector will play the key role. In the wake of these reforms, conditions in Peru are now favorable for the establishment of an energy services market. The Government of Peru has demonstrated its commitment to efficient energy production and use (EPU)¹: it supported creation of the Energy and Environment Center (CENERGIA)² in 1985 and more recently has created the Energy Savings Program under the Ministry of Energy and Mines (MEM). The first generation of reforms did not include explicit efforts to promote EPU, however. The government has now requested technical and financial support from the Bank to identify and

¹ Includes both energy efficiency measures and natural gas-based cogeneration.

² CENERGIA has focused on developing technical information, training courses, energy audits, energy savings studies and has developed a large professional staff with EPU expertise.

undertake specific actions to foster energy efficiency, in particular in sectors where the impact will be the greatest and where the benefits of such activities can be clearly demonstrated.

- 2.4 In response to this request, the Bank undertook an assessment of the current energy efficiency situation in Peru. The assessment revealed that although there is a latent demand for energy services, the absence of an adequate supply of energy services and business and financial arrangements made it difficult to carry out projects to reduce energy costs in the productive sectors, increase their productivity, improve their competitiveness, and modernize the economy's productive plant.
- 2.5 Energy services are understood to mean a wide range of technical and commercial services which seek to reduce energy use and costs to users. Such services are normally provided by companies with expertise and fuel, electrical, mechanical, and industrial engineering, and even in business manager. In mature energy markets such as those in the United States, Canada, Western Europe, energy services are provided by firms of various kinds, such as energy service companies (ESCOs), electricity or gas distribution companies, energy consulting firms, and even government agencies. Under the arrangement provided by ESCOs, energy services normally include an energy requirement diagnostic and energy saving measures. In addition, they raise financing, install and maintain energy efficient equipment and monitor and verify the savings produced.
- 2.6 In the wake of this assessment, and after evaluating various alternatives and recommendations, the Government of Peru selected energy services for industrial users as an appropriate market niche. This selection reflects the fact that the Peruvian industrial sector, which has a relatively high degree of energy intensity and is the principal consumer of electricity and the second consumer of energy overall, needs to improve its competitiveness and productivity in order to withstand domestic and external competition in the context of market globalization.

B. Origin of the project

- 2.7 The energy efficiency market assessment of the Peruvian industrial sector confirmed that there is a latent demand for energy services that has gone unmet because of a series of market barriers and the need for improvements to the regulatory framework. Among other things, it pointed to a lack of information on the benefits of EEPUs projects, limited access to financing, and a fuel pricing system that discourages cogeneration projects³. The assessment also identified options for designing a support program to stimulate both the demand for services and the capacity to provide them. In terms of demand, better promotion of these services among businesses and their industry associations could increase the level of

³ Cogeneration means using thermal energy from industrial processes to also generate electricity, which can be used by the same industrial plant or can be sold to other users or to the electric utility.

customer confidence and interest and thereby encourage demand for services. In terms of the supply of services, the measures proposed will include strengthening or creating energy service providers, generally SMEs, by including new techniques, ESCO⁴-type business models and new financing schemes. Similarly, strengthening the management capacity of these SMEs will open up new markets and possibilities for commercial growth. The assessment confirmed that there is an existing pool of technical capability represented by consultants, engineering firms and equipment suppliers. Nevertheless, most of these suppliers are SMEs facing the same difficulties as SMEs in other sectors of the economy.

- 2.8 In light of the assessment, an action plan was prepared, setting out general elements and specific actions for establishing an energy services market. These actions were divided into two phases: first, those of a policy and regulatory nature; and secondly, steps to eliminate market barriers and strengthen the private sector in activities of this kind. The first group of actions is being supported by a project known as "Consolidation of the Institutional and Regulatory Framework for Sustainable Services to Promote Efficient Energy Production and Use (EPU)", to be executed by the Ministry of Energy and Mines (MEM), for which funding is being requested from the Japan Special Fund. The second group of actions is to be supported by the technical cooperation proposed here.
- 2.9 **The Bank's strategy.** One of the objectives of the Bank's strategy in Peru is to support efforts to increase productivity in the private sector and thereby improve the international competitiveness of domestic output. The activities called for under this project are intended to create a sustainable market for energy services to industry, in accordance with the Bank's new Energy Strategy and the country strategy.

III. PROJECT OBJECTIVES AND BASIC COMPONENTS

- 3.1 The general objective of this technical cooperation is to strengthen the market supply of energy services through the provision of technical and financial training and business development services. At the same time, the project will encourage demand for this type of services through promotional activities targeted at industries with the highest energy intensity indices. The specific objectives are: (i) to enhance the management capacity of energy service providers so they can develop, market and provide efficient, profitable and sustainable energy services; (ii) to strengthen the capacity of financial institutions to work with new financial and contractual arrangements for efficient energy production and use (EPU) projects; (iii) to promote EPU among energy consumers; (iv) to sponsor pilot projects to demonstrate the commercial, technical, financial and legal feasibility of EPU and to test the effectiveness of the tools developed in other components.

⁴ "Energy Service Companies" (ESCO) undertake EPU projects under contracts whereby they are remunerated in accordance with the energy savings they achieve.

- 3.2 The training activities will be carried out first, followed by the technical assistance and promotion components for the first projects. Formulas will also be identified for timely financing of these projects and, if possible, ultimately the energy services market.
- A. **Component 1: Training for energy service providers (MIF US\$320,600; local US\$195,400)**
- 3.3 If potential energy service providers are to overcome their current weaknesses, expand their services and develop new business approaches (similar to the ESCO model), they will require training in marketing and providing energy services. This component will be carried out in coordination with activities for strengthening the SME sector in Peru, so as to take advantage of the expertise and resources already existing in the market. Training for SMEs is expected to expand the supply of energy services and to bring other benefits, such as strengthening the sector and creating new jobs.
- 3.4 The first activity under this component involves hiring an international consultant and a domestic consultant to prepare and/or adapt teaching materials for four three-day workshops. The consultants will first evaluate the training needs of local energy service providers. The SMEs will be selected on the basis of their technical capacity in the area of energy engineering and their experience in the existing services market. Among other issues, the technical capacity of these providers, the number of energy efficiency projects they have completed, their technical specialty, the size of the projects, and their understanding of financial analysis (cash flow, etc.), accounting, and business planning will be considered. The workshops will be given by international and local consultants and will include information on: (i) acquisition of technical and business resources (financing, accounting, human resource management, marketing techniques, etc.); and (ii) the development of energy service businesses using new techniques (performance contracts, monitoring and verification of savings, etc.). It is expected that each seminar will attract at least 50 individuals involved in energy services. A registration fee will be collected from each participant to cover a portion of the workshop-related costs. After each workshop, the training materials will be reviewed and adapted.
- 3.5 Training activities will make use of the results from other program activities once they are completed, so as to provide feedback into the training modules. For example, the component for development of innovative financial mechanisms (component 2) is intended to design new financial instruments, and these will be incorporated into this training component. The assistance activities for pilot projects (component 4) will identify new areas where training is required. As well, the SNMPE will conduct evaluations using surveys and questionnaires to gather participants' views on the effectiveness of the modules, and this information will be fed back into the design, the content and the mid-term evaluation of the project. It is

expected that these training courses will continue to be offered on a commercial basis after the end of the project.

- 3.6 The second activity includes hiring two consultants, one international and one domestic, to perform an assessment of five business service centers. On the basis of this assessment, the consultants will select two centers that are equipped to offer specialized assistance and can provide beneficiaries with tools and technical information on marketing techniques; customer identification and classification; presentation of proposals; design, financial structure and administration of projects; legal issues, etc. The business service centers will also function as information gathering centers.
- 3.7 The third activity will support the hiring of international and domestic consultants to provide specialized technical assistance to energy service providers through these two business service centers during the course of the project.
- 3.8 For the fourth activity, international and local consultants will be hired to select at least two energy service providers capable of adopting business techniques and methodologies that will allow them to function as ESCOs. The consultants will work directly with the selected service providers to develop business plans so that they can incorporate themselves as ESCOs. The suppliers will help to develop the pilot projects. Training activities will take due account of occupational health and environmental aspects.

B. Component 2: Developing innovative financial mechanisms (MIF US\$135,000; local US\$118,500)

- 3.9 This component is intended to identify and introduce specific financial instruments for evaluating EEPU projects. The projects require special tools such as leasing, performance contracts, financing of equipment vendors, guarantees and insurance to offset perceived and real risks. The component will help to improve access to credit for SMEs and will foster greater participation by the private banking system in sustainable development activities.
- 3.10 The first activity will support the hiring of consultants to prepare training materials for financial institution professionals. The consultants will assess the current status of the Peruvian financial system. In particular, it will identify existing instruments for financing energy efficiency projects. The consultants will define other specific financial instruments for evaluating and mitigating the risks inherent in energy efficiency projects. They will also evaluate the training needs of financial institution personnel and will prepare teaching materials for four workshops.
- 3.11 As part of the second activity and using the teaching materials from the first activity, international and domestic consultants will be contracted to give three training workshops in Lima and one in the interior for banking professionals. These

workshops will last three days each and will cover issues relating to financial analysis of energy service projects from a banking viewpoint, and a new, "banker's" approach to evaluating the market for energy services. The training workshops will serve approximately 50 individuals each, for a total of 200. Participants will be charged a registration fee to cover the cost of the workshops. The consultants will review and adapt the teaching materials on the basis of lessons learned during each event.

- 3.12 The third activity will pay for hiring international and domestic consultants to work with six financial institutions in order to develop and promote new financing instruments and new forms of guarantees. As well, the consultants will prepare the operational basis for the new instruments, which will be used for structuring the financing of the pilot projects.

C. Component 3: Technical assistance for pilot projects (MIF US\$262,300; local US\$101,200)

- 3.13 The first activity includes selecting six projects for testing and evaluating alternative mechanisms for financing specific projects in various industries. These projects will be selected based on competitive criteria that include: the economic, social and environmental benefits of the project and the commitment of the potential beneficiaries expressed in the form of counterpart resources. The technical support will strengthen the performance of providers throughout the cycle of an energy efficiency project: energy auditing; presentation and negotiation of feasibility studies; contract preparation; project design; acquisition of bank financing; project implementation, maintenance, and monitoring per se. The working methodology will encourage the transfer of know-how from international to domestic consultants. In this way, the first two projects will serve to train national consultants ("training the trainers"), who will then have primary responsibility for developing the last four projects, with the support of international consultants. This component will result in implementation of six industrial projects with clear environmental benefits and a significant transfer of knowledge.
- 3.14 The second activity involves hiring a local consultant to prepare case studies of projects undertaken within this component. The case studies will be used to help publicize the benefits of EEPUs projects, as well as lessons learned and information on innovative mechanisms for implementing projects. This component will also take occupational health and environmental aspects into consideration. As well, where necessary, some of the activities will include the definition of environmental indicators. The same consultants who developed the pilot projects will also be responsible for working with the local consultant producing the case studies. The case studies will also be used in the wrap-up conference for the project, under the component for promoting energy services.

D. Component 4: Promoting energy services (MIF US\$140,500; local US\$190,500)

- 3.15 In order to reinforce demand for energy services, information must be provided on the benefits of EEPU projects and the use of efficient equipment. This information will be disseminated to industrial users with the highest indices of energy intensity, in order to reduce the transaction costs for EEPU projects.
- 3.16 The first activity under this component will pay for hiring consultants to evaluate the energy needs of the country's industrial users. Based on the results of this evaluation, they will prepare analytical tools for energy consumers, for use in estimating the savings potential in their facilities and thus the kind of measures that could be adopted by the energy service providers who have received training under the training for energy service providers component (component 1).
- 3.17 The second activity relates to the design of technical materials and their dissemination through six promotional seminars, 3 in Lima and 3 in the interior. The seminars will help to increase acceptance and understanding of the benefits of energy efficiency projects on the part of users and service providers. As part of these activities, the materials will be reviewed after each event. The seminars are expected to attract 50 participants.
- 3.18 The third activity involves hiring a local advertising agency to design a nationwide promotion strategy. This work will include designing a logo for the program and placing advertisements in newspapers and periodicals. The advertising agency will also design and produce information brochures, which will be distributed at project events, workshops and conferences. In addition it will prepare a stand to be used at events dealing with energy and environmental issues.
- 3.19 The fourth activity will finance a 3-day National Energy Congress, sponsored by the SNMPE, to be held in Lima in September 2000. This event will be targeted at 500 representatives of generating, transmission and distribution companies, equipment suppliers, energy consultants, major consumers and government officials. The Congress will devote one of the three days to increasing awareness of the project and of the benefits of energy efficiency, and will stimulate market interest in this area.
- 3.20 The fifth activity involves contracting a domestic consultant to design and implement a special section on the SNMPE's existing web page. This activity is intended to disseminate information on the advantages of energy efficiency projects, the ESCO approach to energy services, a list of energy service providers, technical and financial analysis tools, reports on the workshops and conferences, and the case studies. The consultant will also be responsible for maintaining the web page during the project execution period.

- 3.21 The sixth activity will include the design and holding of a wrap-up conference at the end of the project, which will be used to present results and lessons learned. The specific purpose of the event is to develop a profile of market mechanisms that are most appropriate for providing energy services to Peru's industrial sectors and for disseminating results, case studies, relevant experience, technical and financial tools. It will also serve as a forum for promoting interaction among national and international energy service providers and energy users in Peru. The materials produced for the wrap-up conference and throughout the project will become the property of the Bank and of the SNMPE.

IV. EXECUTING AGENCY AND BENEFICIARIES

- 4.1 The executing agency will be the National Mining, Petroleum and Energy Association (SNMPE), which was founded in 1896 as a nonprofit business organization that includes major energy consumers among its members. The institutional objectives of the SNMPE include the promotion and development of mining, oil and energy activities, the sustainable use of natural resources and protection of the environment, as well as social development. Similarly, the SNMPE takes advantage of its presence and reputation to foster greater competitiveness in the sector, and it provides assistance to its members in adopting new techniques and business approaches.
- 4.2 The SNMPE will establish a project execution unit (PEU) which will administer the funds under conditions agreed with the Bank. The PEU will consist of a Project Coordinator, a technical specialist and an administrative assistant (the terms of reference for the PEU are to be found in the technical files). Prior to the first disbursement, the PEU must be fully operational within the SNMPE and the plan of activities for year one of execution must have been defined. Within 30 days after the end of each six-month period, the PEU will submit progress reports and semiannual budget execution reports to the Bank and will prepare a work plan and disbursement schedule for the period. The progress reports will be used as a management tool to monitor the project and take corrective action as necessary; these reports must therefore address the following aspects: (i) identify and analyze unforeseen problems that arise during project execution; (ii) justify activities conducted and demonstrate compliance with time tables; and (iii) verify the timeliness, quantity and quality of the results obtained. As well, the PEU will be responsible for providing a final report three months after completion of the project, analyzing its results.
- 4.3 The proposed project is expected to be executed within 36 months, with a disbursement period of 42 months. Counterpart funding will be the responsibility of the SNMPE, which will demonstrate its commitment by allocating its own funds for some of the activities. The beneficiaries will also provide counterpart resources.

- 4.4 The Bank's Country Office in Lima will have the basic responsibility for project execution. Nevertheless, given the innovative character of the project, the project team will continue to provide its support to the SNMPE during project execution. To this end, it will conduct semi-annual administration missions during the first year and annual missions during the final two years of execution.
- 4.5 Upon fulfilling all conditions prior to the first disbursement, the PEU will request the Bank to disburse money into a revolving fund as a charge to the project, to a maximum amount of 10% of the MIF funding (US\$119,000). These funds must be held in a special bank account in the name of the project. The PEU will submit, within 30 days following the close of each half year, a status report on the revolving fund as of 30 June and 31 December. Disbursement of funds under the grant and the procurement procedures used will be in accordance with Bank and MIF rules.
- 4.6 The SNMPE will maintain adequate internal accounts and will exert financial control over project funding. The accounting system will be designed to provide the necessary documents to permit verification of transactions and to facilitate the timely preparation of financial statements and reports. The project files will be designed so as to: (i) identify sums received from the various sources; (ii) report on project expenditures in accordance with an accounting scheme to be approved by the Bank, distinguishing between MIF contributions and funding from other sources; and (iii) it will include the necessary details for identifying goods purchased and services contracted, as well as the use of those goods and services. The SNMPE will open separate bank accounts for administering the MIF contributions and the local counterpart funds. The SNMPE will process disbursement applications and their supporting documentation on expenditures in accordance with Bank disbursement procedures, and will present the Bank with an audited final financial statement of the project and semi-annual financial statements on the status of the revolving fund.
- 4.7 Within 90 days following the last disbursement for the project, the SNMPE will present financial statements to the Bank covering its contribution and the local counterpart funds, certified by an independent firm of auditors acceptable to the Bank. The costs of the audit will be paid from the MIF contribution, in accordance with Bank procedures.
- 4.8 Beneficiaries of the project will include: (i) 200 representatives of potential providers of energy services, who will receive training in the workshops; (ii) representatives of SMEs who will have access to business service centers; (iii) six SMEs that will receive specialized technical assistance; (iv) four lending institutions that will receive specialized technical assistance in providing financing to SMEs; (v) productive-sector energy users; and (vi) the SNMPE, which will be strengthened as a result of the project.

- 4.9 The project is at an advanced state of preparation, because the design, budget and activities were prepared in collaboration with the major participants, with the assistance of technical experts.

V. COST AND FINANCING

- 5.1 The cost of the project is estimated at the equivalent of US\$1,990,000, of which the equipment of US\$1,190,000 will be contributed from MIF resources (Human Resources Facility), on a nonreimbursable basis, and the balance of US\$800,000 will come from local counterpart contributions. The latter amount will be provided as follows: US\$400,000 in cash and US\$400,000 in kind. Given the innovative nature of the project, there is a relatively high allowance for contingencies, set at 10.9% of total project cost. A summary of the principal cost and financing items for the project is presented below. The detailed budget can be found in the technical files.

(US\$ Equivalent)

CATEGORIES	MIF	LOCAL	TOTAL	%
1. Training for service providers	320,600	195,400	516,000	25.9
2. Development of financial mechanisms	135,000	118,500	253,500	12.7
3. Technical assistance for pilot projects	262,300	101,200	363,500	18.3
4. Promotion of energy services	140,500	190,500	331,000	16.6
5. Coordination, execution and administration	120,000	90,000	210,000	10.6
6. Evaluation	50,000	—	50,000	2.5
7. Independent financial auditing	—	50,000	50,000	2.5
8. Contingencies	161,600	54,400	216,000	10.9
TOTAL	1,190,000	800,000	1,990,000	100.0
% of total financing	60%	40%	100%	

- 5.2 **Sustainability.** This project seeks to lay the foundations for the development of a sustainable services market for efficient energy production and use in the industrial sector in order to make the expected outcomes more sustainable. The project design incorporates a support strategy with three main elements. First, it seeks to strengthen demand for energy services through promotional activities and demonstration projects. Second, the project will increase the supply of these services through training activities for companies that supply such services. Third, to create a supportive environment, the project will work with financial institutions to increase access to financing for EEPUs and in coordination with the achievements of the regulatory framework reform project with the Government of Peru. The strategy also provides for the long-term participation of the SNMPE to support the process of market transformation and assistance for both energy users and service providers. The SNMPE will also promote participation by productive sector actors and members of the public sector, universities, nongovernmental

organizations, associations, and private-sector companies to disseminate the project and promote its sustainability.

VI. BENEFITS AND RISKS

A. Benefits

- 6.1 This project, in conjunction with the parallel and complementary project undertaken by the MEM for the public sector, will contribute to: (i) identifying and overcoming barriers to the establishment of energy service providers; (ii) creating a new market for businesses providing energy services with value added; (iii) attracting private investment in new technologies using clean and efficient systems; and (iv) environmental benefits through the replacement of polluting technologies by clean ones, projects to reduce energy consumption, emissions of pollutants and greenhouse gases, and mitigating the environmental impact of natural resource exploitation.
- 6.2 The use and production of energy – including cogeneration – will produce benefits in the form of substantial improvements from the enhanced performance of generating equipment and the better use of inputs. From the viewpoint of industrial producers and other major consumers, cogeneration will strengthen their negotiating capacity with power generating companies, and the competitive market mechanisms so established will in the end increase the productivity of cogenerating companies as well.

B. Risks

- 6.3 The principal risks of this project relate to the innovative nature of the proposed activities, the business models and the sustainability of the market for energy services. There is also a risk that market agents will not adopt the new concepts and models proposed. Moreover, there is a possibility that the project's effectiveness will be undermined if the complementary project developed by the MEM is not able to entrench the changes needed in the regulatory framework.
- 6.4 The proposed activities have been structured on the basis of a market assessment and experience with EEPU processes and projects in other developing and industrialized countries. Sustainability of the proposed market will depend on sustained demand and on the availability of financing for these activities. In this respect, the project will support specific promotional efforts to stimulate demand for these services, and efforts to identify and implement financial mechanisms for activities of this kind appropriate to the Peruvian financial system. Lastly, the project with the MEM has already been approved by the Bank and will be financed with resources from the Japan Special Fund. The Bank team is planning to organize

a workshop for project teams in the next few weeks to review the operational details and ensure coordination of the two technical-cooperation operations.

VII. PERFORMANCE AND EVALUATION INDICATORS

- 7.1 During project execution, individual consultants will be hired to perform a mid-term evaluation, 24 months after the beginning of the project or when 50% of the funds have been committed, and a final evaluation, to be prepared within six months after the execution stage. These evaluations will focus on key areas such as: the number of the new energy service providers and their financial solvency; a census of EEPUs projects, including the modalities used (type of contract, financing scheme, technologies etc), their size and their typical clients; the impact on energy users' productivity; measuring the cost of service provided and its ratio to benefits obtained. As a supplement to these external evaluations, the project team will conduct annual performance evaluations to determine, if necessary, any actions to improve or modify its execution. The SNMPE will provide access to all information and documentation necessary for these evaluations.
- 7.2 The SNMPE will compile quantitative and qualitative indicators for purposes of supervision and for preparing the mid-term and final project evaluations. The qualitative indicators will include: (i) information on the type of businesses participating in the program; (ii) the extent to which participating SMEs are applying the project tools and offering new energy services; (iii) the degree of improvement in energy performance as a result of companies' participation in the project; (iv) the private sector contribution and its ability to sustain training activities; (v) the level of satisfaction with the new consulting and training services, both among SMEs and among industrial energy users.
- 7.3 The quantitative indicators for the project will include: (i) the project impact, including the results of supervision and business participation in the project (total number of participants, number of participants per event, total professional staff trained); and (ii) the cost effectiveness of the program. The logical framework, including the performance indicators, is found in Annex I.

VIII. EXCEPTIONS TO BANK POLICIES AND PROCEDURES

- 8.1 No exceptions to Bank policies and procedures are proposed for this project.

IX. SPECIAL CONTRACTUAL CONDITIONS

- 9.1 Prior to the first disbursement, the PEU must be fully operational within the SNMPE, which means, at least, that the Project Coordinator must be appointed.

LOGICAL FRAMEWORK

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
OBJECTIVE			
Objective of this project is to enhance the market supply and demand for energy services to improve the competitiveness of the country's industrial companies	Reduced energy consumption indices and increased profitability and output for industrial companies.	Ex-ante and ex-post status reports produced by the computerized system to be implemented by the Government of Peru.	The Government of Peru creates conditions conducive to private participation in the market for energy services, through amendments to institutional and regulatory framework. Macroeconomic conditions remain healthy.
COMPONENT 1: TRAINING FOR ENERGY SERVICE PROVIDERS			
Objective: to enhance the technical and business capacities of energy service providers.	Sufficient number of qualified energy service providers to meet future demand.	Future surveys to evaluate the level of energy service providers.	There is sufficient demand for energy services to sustain the providers.
Identify training needs of energy service providers.	Training needs report.		
Adapt training materials.			
Conduct training workshops for energy service providers.	Specialized advisory services for approximately 50 workshop participants.	Record of participants at workshops and conferences.	There are sufficient SMEs providing similar services who are interested in providing energy services. Existence of suitable centers.
Identify and selection of business centers.	Selection of two centers best able to offer specialized assistance.		
Provide advisory services for energy service providers.	Number of consultations conducted and materials distributed.	Monthly report from each center.	There is demand for business energy services.
Develop business plans for establishing energy service providers.	At least two business plans.	Semi-annual progress reports on new energy service providers.	Market players are prepared to develop business mechanisms.
COMPONENT 2: DEVELOPMENT OF INNOVATIVE FINANCIAL MECHANISMS			
Objective: to improve the capacity of financial institutions to work with new contractual arrangements for energy services.			There is interest on the part of financial institutions and demand on the part of energy service providers.

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTION
<p>Existing characteristics and needs for financing EEUP</p> <p>Training materials aimed at various entities.</p> <p>Organizing workshops.</p> <p>Identify and promote new financial instruments.</p>	<p>Training needs report.</p> <p>Assistance for approximately 25 participants per workshop.</p> <p>Adoption of financial instruments.</p>	<p>Mid-term report and final report.</p> <p>Record of participants at workshop and conferences.</p> <p>Semi-annual report on financial institutions.</p>	
PHASE 3. TECHNICAL ASSISTANCE FOR PILOT PROJECTS			
<p>Objective: to advance the implementation of EEUP projects in the country.</p> <p>Select projects for testing and alternative mechanisms.</p> <p>Provide support for pilot projects.</p> <p>Develop case studies.</p>	<p>At least six projects selected.</p> <p>Assessment, technical proposals, financial proposals and contracts for each of these projects.</p> <p>Presentation slides and reports on case studies.</p>	<p>Evaluation tool for classifying potential projects.</p>	<p>Existence of potential EEUP projects.</p> <p>Existence of projects sufficiently successful that case studies will be developed.</p>
PHASE 4. PROMOTION OF ENERGY SERVICES			
<p>Objective: to increase awareness of EEUP</p> <p>Identify energy needs of industrial and commercial sectors.</p> <p>Develop analytical tools for energy management.</p> <p>Produce technical materials and sponsor seminars.</p>	<p>Energy needs report.</p> <p>Guidelines, reports and computer programs.</p> <p>Six seminars with approximately 50 participants each.</p>	<p>Use of tools by companies and organizations beyond the project.</p> <p>List of participants.</p>	<p>The Government of Peru facilitates the development of an energy service by amending the institutional and regulatory framework.</p>

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTION
<p>al advertising agency to nationwide promotional</p> <p>gress to increase awareness ect.</p> <p>ate and establish a web page.</p> <p>ponsor an international o present results and lessons</p>	<p>The marketing strategy including a logo, brochures, articles, advertisements and a display stand.</p> <p>Approximately 500 international and Peruvian participants.</p> <p>High volume of visitors to the Web site.</p> <p>At least 150 participants.</p>	<p>Increased industrial interest in the project.</p> <p>Monthly report of Web site visits.</p> <p>List of participants.</p>	<p>SMEs interested in the project to the Internet.</p>

PROPOSED RESOLUTION

PERU. NONREIMBURSABLE TECHNICAL COOPERATION TO DEVELOP
A SUSTAINABLE MARKET FOR SERVICES TO PROMOTE EFFICIENT
ENERGY USE AND PRODUCTION IN THE INDUSTRIAL SECTOR

The Donors Committee of the Multilateral Investment Fund

RESOLVES:

1. That the President of the Inter-American Development Bank or such representative as he shall designate is authorized, in the name and on behalf of the Multilateral Investment Fund, to enter into such agreements as may be necessary with the Sociedad Nacional de Minería, Petróleo y Energía (SNMPE), and to take such additional measures as may be pertinent for the execution of the project proposal contained in Document MIF/AT-____ with respect to a technical cooperation project to develop a sustainable market for services to promote efficient energy use and production in the industrial sector.
2. That up to the amount of US\$1,190,000, or its equivalent in other convertible currencies, shall be authorized for the purpose of this resolution, chargeable to resources of the Human Resources Facility of the Multilateral Investment Fund.
3. That the above-mentioned sum is to be provided on a nonreimbursable basis.