



## Peru Energy Services Companies Exchange Program

Activity: Energy Services Companies Exchange Program for Peru  
Program Area: Energy Sector Governance  
Implementer: The Academy for Educational Development  
Geographic Focus: Latin America  
Country: Peru  
Duration: September 1999 – March 2004




Local engineers and technicians attend a session on "Energy Efficiency Applications in the Industrial and Commercial Sector," at the Sociedad Nacional de Industrias in Lima, Peru in March of 2004.

### Project Background

Peru has shown leadership in modernizing its economy by introducing a series of reforms affecting the banking, industrial and energy sectors. In 1991, the country began a process of transition from a highly regulated economy toward establishing a market economy in which the private sector plays an important role in the development of the country.

Prior to the reform efforts, Peru showed a commitment to promoting energy efficiency by supporting the establishment of the Center for Energy and the Environment (CENERGIA) in 1985, focusing on the development of technical information, training courses, energy audits and other energy saving analyses. The legacy of CENERGIA in Peru is a sector of consumers with energy efficiency awareness and a solid technical and human resource base that is trained and experienced in energy efficiency projects.

More recently, in response to electricity shortages, the Ministry of Energy and Mines (MEM) created the "Programa para Ahorro de Energia (PAE)" to carry out electricity saving campaigns that were highly successful in reducing peak demands on the system. However, the government fully recognizes that its role in promoting energy efficiency has to be redefined drastically as it pulls back from ownership and control of the means of energy production and delivery. They are aware that a new, primary role for the private sector in sustainable energy markets has to be developed.



As a result of an Inter-American Development Bank (IDB) initiative, supported technically and financially by the U.S. Department of Energy (DOE), U.S. Agency for International Development (USAID) and the European Commission (EC), the Sustainable Markets for Sustainable Energy Program (SMSE) was created in 1996. The purpose of the Program is to develop, test and show different strategies and mechanism for promoting the use of sustainable energy applicable to the restructured markets of Latin American countries. The creation of SMSE is based upon the concept that it is not sufficient for a certain energy source or technology to be sustainable from a technical, environmental or social point of view; it must be sustainable in a competitive market. Market forces must allow development and use of sustainable energy options so that they may survive, independent of any specific government or external aid.

In 1999, SMSE and Peru completed the report, "A Diagnostic of the Present Situation of Energy Efficiency in Peru", with emphasis on the industrial sector and on the availability of energy efficiency services to this sector. In addition, the diagnostic reviewed regulatory and government roles and recommended activities to strengthen the regulatory framework for a range of energy efficiency and related services.

The diagnostic found great interest but little capability to implement ESCO- type projects. One of the key elements in the application of ESCO projects is ability to see which projects should be undertaken and in what way. It is also important to know how to construct and conclude adequate contractual agreements. While there are guidelines, instructions and descriptions of how to do this, the real knowledge comes through experience. This know-how must be transferred to individuals and companies in Peru. In 1999, USAID believed that the most appropriate type of support activity for this program would be an exchange program between Peruvian engineering/consulting companies and North American ESCOs. However, the IDB program start-up was delayed for several years, and during the intervening period, Peru's needs have changed. Consequently, USAID's focus has shifted toward providing training to a broader group of stakeholders who collectively will have a greater impact within Peru.

The training program was designed to promote investment and development of energy service providers to improve the competitiveness and productivity of the industrial sector in Peru, with important environmental benefits derived from the corresponding avoided expansion of energy production, distribution and utilization of energy.



### Development Objective

The training program provided a series of workshops to improve the business practices and success rate of local Peruvian energy services companies and other relevant stakeholders (including financial institutions, policymakers, and end-users) whose activities will increase the efficiency of energy utilization in the industrial sector and hence improve its environmental performance.

The program also provided opportunities for local small and medium Energy Services Companies (ESCOs) to obtain first-hand practical experience in designing and implementing projects through interaction with other appropriate experts such as financing specialists. The training program will strengthen the market for energy efficiency services in Peru and create demand for financing for the creation of or expansion of energy services businesses. It will also encourage the implementation of energy efficiency projects.


### Approach

USAID provided a series of courses series of training courses on the practical aspects of operating, managing and marketing Energy Services Companies

(ESCOs), including experiences from the US and other countries, with the broader goal of helping to foster the energy efficiency market in Peru. For purposes of this program, the ESCO concept refers both to the idea of performance contracting and shared savings arrangements, as well as to the broader range of energy services. The four 2- to 3-day courses were geared to key actors in the energy sector: policymakers; industrial and commercial energy users; energy companies; financial institutions; and consultants and equipment providers.

### Project Activities

Four training courses were held in March, 2004. The courses were designed to instruct private companies, consultants, financial institutions, and government representatives regarding market opportunities for energy efficiency and energy project structuring. This topic is of special importance in Peru right now given the Camisea gas project, which is expected to precipitate a significant conversion to natural gas from other fuel sources in the Lima area beginning later this year. In addition, industrial competitiveness is currently a key issue in the Peruvian private sector, as the country considers free trade agreements.



Each course was tailored to the particular stakeholder group. The courses emphasized market opportunities for financing equipment and energy systems, project finance and contracts including ESCO models, energy efficiency services, risk analysis, financial and cost-benefit analyses, and new technologies for energy improvements. Courses also covered natural gas conversion, efficiency with gas, and experiences and examples of obtaining carbon credits and environmental benefits for energy projects. The courses sought to introduce practical skills necessary for Peru to properly take advantage of the potential for energy savings opportunities through a better understanding of technical, financial, and regulatory requirements.

Course attendance ranged from 15 government officials in the government course to over 200 participants from the private sector and academia in the course geared toward financial institutions. The end-user course was attended by more than 90 technical staff from industry, while the course for consultants was limited to 30 in order to provide more room for interaction.

### **Project Results**

The workshops were implemented shortly before the project's conclusion, so there are no results to report at this time.

### **Development Impact**

There is no impact to report at this time, since the workshops have just been completed.

### **Lessons Learned**

#### **Logistics**

- Selection of non-conventional workshop hosts (Finance and Accounting College at the University of Lima, an entity not normally associated with energy efficiency financing), resulted in additional excitement about the topic, and a greater promotion effort, and much better attendance than expected.
- Fostering South-South collaboration resulted in very effective workshops. Key presenters were 4 Mexicans, 1 Brazilian, and 3 Peruvians, along with two US expatriate experts. The cultural similarities and language capabilities avoided the need for expensive and interruptive translation, and offered a more open and exchange-oriented workshop atmosphere. The Mexican and Brazilian presenters offered reduced costs compared to equivalent US expatriates. In addition, all of them had been beneficiaries of previous USAID programs, so USAID is in a sense recovering part of its investment while promoting regional communications.



- The organization of all of the four workshops during a short intense period (one and one-half weeks) was cost-efficient and allowed simultaneous promotion to the four sectoral audiences (industry, financial institutions, consultants and government).

### **Content**

- The workshops were a logical complement to the IDB-funded Rational Energy Use Program for Peru, in conjunction with the Ministry of Energy and Mines. To date that program has focused only on studies, so public workshops were a welcome addition.
- The workshops appeared to fill a great need for information on energy efficiency. All audiences were larger than expected and extremely interested in the topic, and wanted as much information as possible. This is due to a number of reasons, including: little government or other support for energy efficiency over the past several years; imminent natural gas availability in Lima; serious issues of competitiveness in the industrial sector; and high liquidity in the local banking sector.
- The question of government support for energy efficiency was also the subject of some criticism: since the electricity sector in Peru is almost completely restructured and largely in private hands, there is a sense of pride in the market mechanism, resulting in a negative opinion of government intervention in the market, even in the case of energy efficiency where it has been shown that government support and market signals are extremely cost-effective.
- There was a great desire to know more about natural gas, how to use it, its pricing and conversion of equipment to take advantage of its use.
- The training programs provided an opportunity to mention and promote USAID supported environmental activities, including support to the CET (Center for Technological Efficiency, a cleaner production center), support to the national environmental commission (CONAM), as well as the guarantee fund for cleaner production (including energy efficiency) projects offered by USAID's Development Credit Authority through a local private bank.

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