Peru’s Energy Future: Sustainable Energy Strategies – June 2016

EXECUTIVE SUMMARY

This study aims to describe the current situation of the Peruvian energy system and underscore the deep dependence on fossil energy resources in recent years. Also, a conceptual drift energy strategy is detected, reflected in the development of long-term energy plans that are committed to the use of fossil fuels in the transportation and electricity generation sectors; in the development and implementation of savings and energy efficiency modest and disputable objectives; and a shy promotion of the massive integration of renewable technologies in the national energy structure.

A thorough knowledge of the national energy situation allows to raise, from the perspective of energy sustainability, the general guidelines for the transformation of the currently existing unsustainable energy model. A sustainable energy model must prioritize the replacement of petroleum and other fossil resources in the transportation, agriculture, fisheries, residential and tourism sectors. Also, the transformation of the current energy model should focus on the development and implementation of plans for energy savings and efficiency throughout the chain of generation, transformation, distribution and use of energy facilities and decentralized renewable energy integration against the fevered planning of large energy infrastructure without properly assessing the environmental impacts and the depletion of fossil resources. A sustainable energy model must be based on the creation of mechanisms of intelligent consumption, demand management and cultural change in consumption patterns.

The study is divided into several chapters. Chapter 1 discusses the projections of energy demand in determined time horizons, established in emblematic documents produced or financed by the Ministry of Energy and Mines (MINEM), such as the "National Energy Plan 2014-2025" and the study "New Sustainable Energy Matrix and Strategic Environmental Assessment "(NUMES-EAS). Chapter 2 focuses on assessing the evolution of the implementation of energy efficiency measures in Peru and a detailed analysis of the energy efficiency targets of the "Benchmark Plan for Efficient Use of Energy 2009-2018" and "National Energy Plan” 2014-2025 "in different sectors of the final energy demand. Chapter 3 analyses the regulatory environment, which allowed the takeoff of renewable energy in Peru, and the results of the various auctions of renewable technologies for power generation made since 2009. Chapter 4 describes cogeneration systems and the potential of existing conventional and renewable cogeneration in Peru. Chapter 5 addresses the issue of the evolution of electric transmission and distribution systems in Peru, as well as levels of energy loss and margins for possible additional reduction in the electrical system. Chapter 6 presents a list of state and private organizations dedicated to promote the integration of renewable energy, the development of long-term energy strategies, creating platforms for energy policy reform and development of savings and energy efficiency in Peru. Finally, in Chapter 7 the final conclusions and recommendations of the general guidelines for developing a sustainable energy strategy long term in Peru are presented.