Editorial – Issue 18 – April 2013

In its publication entitled “Communication number 152” (2012), the Institute of Applied Economic Research (IPEA) analyses the interactions between academic institutions and companies in the electricity sector in the context of R&D projects. In the conclusion section, the authors mention the fact that R&D structures of enterprises are still strongly geared to the bureaucratic requirements of the programme. The study entitled "R&D in the public and private sectors in Brazil: complementary or substitutes?" (free translation from the original title: “P&D nos setores público e privado no Brasil: complementares ou substitutos?”) by Velho, Velho and Saenz, 2004, argues that despite the encouragement for the interaction between the academic and business sectors, focused on specific endeavours, firms still do not make investments, in general, in their own R&D infrastructure. As a result, links do not become permanent and thus the formation of enduring research networks is impaired.

An informal look on this information and on other recent publications on the subject allows us to conclude that the business sector still lacks a bolder attitude in relation to R&D. Its main result, namely the knowledge generated, which can lead to the acquisition of sustainable competitive advantage, is not assimilated by the company, due to the fragility of the interaction mechanism. In other words, the company fails to appropriate the main result of R&D, because it does not actually participate in the generation of knowledge.

"Building a bridge over the gap between academia and industry" requires a new approach of management. The main reason for this is that to undertake R&D as a means to achieve innovation is an activity which is distinct from other business activities, fraught with uncertainties, and for which the knowledge involved is not fully mastered. Otherwise there would be no generation of knowledge. Traditional management methods tend to repel uncertainties and minimize risks, and thus act in the opposite direction to the nature of R&D.

World industry and in particular the Brazilian industry have much to gain from the interaction with academia, especially within dynamic markets in which innovation becomes key to the sustainability of companies. A new business attitude in which a company effectively participates in activities based on expertise and scientific creativity will be essential to ensure that these gains can finally be achieved.

Many are the benefits of this new approach for the country, but the main one consists of innovations for which the country already has enough ingredients, and which will allow the country to reap the fruits of its own investment. However, to reach this new attitude and achieve these results, it is necessary to break paradigms, think differently, try new settings, promote experimentation and finally, value creativity. The first step is to stop trying to perform activities of different natures always using the same techniques.

Espaço Energia, starting from this edition, ceases to publish the printed version, focusing on the online version, following a trend that has been gaining ground, especially in the context in which it lies. This edition features five papers whose subjects are presented next. The first article describes a study on the most suitable sites for the installation of foundations for wind turbines on the coast of the state of Paraná, reaching a solid proposal considering various parameters and constraints. The second article presents the development of a helmet equipped with an electric network proximity sensor as a safety accessory for use in maintenance activities of energised lines. The third article presents a comparative study of three types of bulbs, namely, incandescent, compact fluorescent and LED, analysing various parameters such as cost, service life and efficiency. The fourth article, in English, addresses security issues in the context of advanced metering infrastructure, including data protection, privacy in the use of smart meters and their relationships with the regulation in Brazil. The fifth and final article analyses the imbalance of the cargo transportation matrix in the state of São Paulo, proposing intermodality between highway and railway, motivated by the fossil fuel economy and aspects related to the environment.

We wish you all good reading, and that the new format of the magazine can further expand the dissemination of knowledge in the area of energy.

Klaus de Geus
Editor-in-chief