

A Reflection on Energy and Sustainability

Summary

The National Council on Sustainable Development /CNADS considered it appropriate to conduct a Reflection on the energy problem based upon an analysis of the national energy system's level of sustainability and expected trends of development, lending special emphasis to cases for planning the economy, social concerns and the environment. This Reflection is based upon the principle that is not only a strategic economic asset, but also a scarce natural resource. The idea that the era of cheap and abundant energy has ended and that all social partners need to be informed and prepared for profound changes that have appeared on the horizon, in such a way that the transitional process can succeed in bringing about a more sustainable energy system.

The notion of energy sustainability calls upon a focus on the following overarching criteria: (i) that energy sources must not be depleted substantially in order to ensure continued use; (ii) that energy use should not generate harmful emissions and other risks to the environment on a significant scale; and (iii) that policies do not involve the perpetuation of risks to human health, as well as social injustice.

The Reflection is entitled "Energy and Sustainability" and has a dual purpose: providing a report, in the most accessible manner possible, directed to the public at large, which in general is badly informed about the parameters of the energy problem; specifying broad lines of action, especially with respect to public policy and the functioning of energy markets.

In the context of the biggest concerns of international organizations and the European Union, as well as domestic political and energy sector goals, three strategic goals were taken into consideration: security associated with the provisioning of energy service, competitiveness and environmental suitability.

The structure of the Reflection includes two main Parts: the first Part includes a historic outline of the energy problem and a normative and factual analysis of its most relevant issues of plans on a global, European and national scale; the second Part is an evaluation of national public policy, with direct examples of the energy supply and exploration, particularly cases persuading to energy policy itself, but also those related to housing, urban issues, transportation, mobility and the environment (climate change and wastes management). The second Part also seeks to describe energy markets (natural gas and electricity), focusing on the fundamental issues surrounding the transition to a European market, liberalization, tariffs, the management of transport networks, and, finally, distributed generation and micro-generation.

The first Part is organized around the following basic principles, understood in the sense of fundamental values that undergird human actions and lead to paradigmatic changes: energy conservation (including eco-efficiency and savings), energy diversification, solidarity or

cooperation and autonomy. The second Part covers the other key principles: responsible governance, safety, economic efficiency and decentralization.

The Reflection also includes a Conclusion, as well as a broad set of Recommendations and some Final Considerations. The Conclusion addresses three crucial issues:

- the inevitable change to the energy basis of economies and societies that will occur over the next several decades with the decline of the role of fossil fuels and the ascendancy in alternative energy sources: such supplies are low in density and inexhaustible relative to supply, while non-renewable energies, at least in the near-term, are concentrated in a steady supply stream;
- the paradigm shift in energy policy, with the emphasis placed upon energy management “alongside exploration”, through measures that improve the efficiency and savings of the end user, and only incidentally in management “alongside supply”;
- the need for a new strategic approach to public policy and new tools for intervention, capable of promoting and stimulating the education and participation of citizens and economic and social partnerships, in order to achieve success in the transitional process to a new sustainable energy model.

The Reflection proceeds with 48 Recommendations organized, according to each Line of Action, in both a general and specific fashion. The first are subdivided according to foreign policy guidelines (positions to be adopted by representatives of Portugal in international *forums* and within the European Union), with greater reliability of data and greater transparency of communication of relevant information on global energy resources, the promotion of international cooperation, negotiations for the post-Kyoto era, and domestic public policy, in the realm of greenhouse emissions gases (GEG), and the efficiency of diversification of primary energy sources.

A specific measure are developed in fields of study and development, information technology and professional development, information technology and communications, the strengthening of institutional coordination and articulation of sector and vertical planning, policy guidelines, tax and financial incentives, auditing and oversight, and of best company practices and of the energy certification of buildings.

Finally, Final Considerations are introduced in the context of fundamental uncertainty the knowledge and major guarantee executed by public policy pertaining in the energy area, given that the efficiency of such policies depends upon the development and participation of citizens and their ability to reach consensus in light of the urgency of implementing a transitional strategy for a more sustainable energy system such that measures to be adopted in this context must have an accelerated timeline that overcomes established routines and focuses upon long-term goals relating to immediate and specific issues.