

IV INTERNATIONAL WORKSHOP ON OIL AND GAS DEPLETION

Opening Statement by the Secretary of State for Industry and Innovation

Ministry of Economy, Industry and Innovation

Firstly, I wish to thank you for the invitation to say a few words at the opening of this important workshop. At the beginning of the XXI century an increase of awareness rose that the fossil fuel resources are limited in the planet we inhabit. Their production costs and therefore their prices tend inevitably to increase and their intensive usage has a significant impact on the environment. In a word, there is a growing concern with the long term security of supply of energy at reasonable prices in a context of sustainable social and economic development.

Please allow me a brief historic review. The XVIII century industrial revolution marked the intensive use of carbon, through the use of coal to satisfy the energy needs of the developed countries. Later on, during the XX century, oil became the main source of energy, remaining the dominant fuel in the transportation sector.

However, with the oil supply crises of the seventies and the correspondent hike in prices, energy policy turned to aim at the decrease of the economic systems dependency on hydrocarbons, particularly on oil, by replacing it gradually with alternative solutions mainly based on renewable sources of energy that would ensure long term sustainable development.

Among all European Union Member-Sates, Portugal has one of the highest percentage shares of energy consumption covered by renewable sources - about 17% of total primary energy needs.

Despite the fact that incentives have been made available to the development of alternative sources of energy, their share in total supply has been kept more or less stable in the last 15 years: as the wind power generation grows the usage of wood and vegetable waste is decreasing. Although we expect an

important increase in the contribution from the renewable sources of energy, in particular for electricity generation, we will need a few more years to have them playing a more important role in our energy market.

In other words, Portugal will stay strongly dependent of hydrocarbons, oil and gas, to fulfill a significant part of its energy needs. In 2003 this dependency was about 70% and as a country with no hydrocarbon production these have to be totally imported.

Looking ahead, considering the fact that the hydrocarbons represent a non-renewable source of energy at the human life scale, a moment will come after which the production capacity and the discovery of new reserves will be unable to fulfill the needs of the world.

Although world hydrocarbon proven reserves have increased during the eighties from 30 to 43 years of consumption, this indicator has, since then, decreased continuously to 40 years of total supply in 2003.

Regarding natural gas, the picture is somewhat different since the number of years of consumption covered by the proven reserves has been increasing since 1980, from 58 to about 68 years. However, with the expansion of the use of natural gas for power generation and with the expected economic and social development of the Far East, particularly in China, it is estimated that the ratio will worsen significantly in the coming decades.

It is true that the volume of proven reserves is a function of price levels, given that increasing oil prices in the international market, this will logically increase both the total volume of proven and speculative reserves. The question is to know whether by increasing the rates of discovery of new reserves and of extraction of the existing ones, the resulting market prices are not prejudicial to the economies in general. In other words, by trying to secure energy supplies on the supply side, we may endanger the economies through the practice of non-reasonable prices, and thus cause difficulties to the economic and social sustainable growth.

In view of this challenge and the inevitable decrease of hydrocarbon reserves in a more or less long term, the economies, primarily the consuming ones like the Portuguese, have to increase their efforts to diversify and to introduce more flexibility into the patterns of energy supplies, to continue reducing their dependence on liquid and gaseous hydrocarbons and, at the same time, to discover new hydrocarbon reserves preferably in their own territories.

In this last context, Portugal has geological conditions for the formation and accumulation of hydrocarbons, both in conventional deposits and in the deep offshore. In fact, even though no commercially viable hydrocarbon accumulation has been found so far, the presence of liquid and gas hydrocarbons have been confirmed by several exploration drillings on and offshore.

Historically, hydrocarbon exploration in Portugal started onshore, mainly in the Lusitanian basin. In the seventies oil exploration extended to the shallow offshore - less than 200 m water depth. To date in Portugal, no exploration wells were drilled bellow 500 m water depth.

The Lusitanian sedimentary basin is underexplored, given that the number of wells per thousand kilometers was only 2.4, which is considered a rather low ratio. If we bear in mind that most of the wells in this basin were drilled onshore, with similar geological objectives and that a majority of them did not reach prospectable older layers, the low level of the evaluation of hydrocarbon potential becomes quite obvious.

In all other Portuguese sedimentary basins, the well density is even lower and in deeper waters - bellow 200 m - only four wells were drilled but in water depths less than 500 m.

Consequently, we can say that the hydrocarbon potential of the Portuguese sedimentary basin is not properly assessed.

As I mentioned before, there are conditions for the formation and accumulation of hydrocarbons in the Portuguese sedimentary basins, confirmed by numerous and strong shows during the few drilled wells. In the last ten years conventional seismic and gravity surveys carried out in the deeper waters of the Portuguese

coast seem to indicate a relatively high hydrocarbon potential of the deep-offshore Portuguese basins, similar to the potential of some countries considered good producers.

Since Portugal is a country which imports all hydrocarbons required to fulfill its energy needs and being the hydrocarbon potential of its basins, mainly in the deep-offshore, regarded as reasonably high by companies with expertise in this business, it is the intention of the Government to attract the investment of hydrocarbon exploration companies, in order to better know our physical and economical potential in hydrocarbon resources.

We hope to create all the necessary conditions to accelerate an exploration with state-of-the-art technology and know-how, which will allow us to find commercially viable hydrocarbon accumulations and therefore reduce the national dependence on external supplies.

Finally, I would like to congratulate the organizers of this workshop and to wish that your work will be fruitful.

Thank you very much for your attention.

António Castro Guerra
Secretary of State for Industry and Innovation