

GUARANTEE OF SUPPLY IN THE ELECTRICAL SECTOR

Modern society takes for granted the electricity we have available every day. No-one really cares to think about what has gone in to delivering the electricity supply. No-one stops to wonder about what has been done to generate the electricity, what fuel has been burned or how the power has been transmitted across the country. These are things no-one has the time to think about. And why should we think about them?. It is natural for us to think only about what we are going to do with the electricity -what lights need to be on, or what programme is on the television, for instance.

The paradox is that electric power is only something we notice, when it isn't there. Europeans still experience power blackouts, but these days they are extremely rare and normally do not last very long.

This situation is especially evident in the European Union, one of the main consumers of energy in the world, and where it can be seen that the scarcity of energy resources within its territory means that it is highly dependent on other geographic regions which have an excess of energy resources.

- ◆ The consumption of primary energy in the European Union is currently the equivalent of 1,500 million tons of oil, where the countries of the OECD consume 30%, and 15% of all world consumption.
- ◆ The European Union imports the equivalent of 700 million tons of oil, principally in crude oil and natural gas.
- ◆ The constant growth in the consumption of primary energy and the limitations in the growth of internal production mean that, in the future, this high level of dependency on external supplies will be even greater, reaching 70% within a period of 20 years.

This increasing dependence on energy brings physical, economic and social risks to the European Union, which are aggravated by its inability to exert any influence on the international primary energy markets.

Among the physical risks, we should like to emphasise:

- ◆ The unavailability of new sources of natural gas and oil with reasonable production costs.
- ◆ The need to abandon the production of coal for environmental reasons.

Among the economic risks, we should like to emphasise:

- ◆ The volatile nature of the prices on the crude oil and natural gas markets.

- ◆ The increase in energy production costs as it becomes necessary to resort to more expensive sources (renewable energies).
- ◆ Exposure to situations where supply is lacking due to the high level of dependency on external energy.

Among the social risks, we should like to emphasise:

- ◆ The different incidence of energy price variations on different productive sectors and segments of the population, resulting in social conflicts which are potentially very dangerous.
- ◆ The greater incidence of energy crises on European productive systems and the subsequent, negative effects on the rhythm of economic activity and increases in the levels of unemployment.

The need to apply a strategy, at a European level, for ensuring the supply of energy brought about the Green Paper of the European Commission of 29th November 2000, whose objective was to open a debate on the essential questions and risks involved in the future increase in our dependence on energy.

A long term European strategy should take into account:

- ◆ The liberalisation of energy markets.
- ◆ Environmental commitments.
- ◆ The actual independence of the Member States with regards to the fight against changes in the climate and the realisation of an internal energy market.
- ◆ The enlarging of the European Union with new Member States having different energy structures. This enlarging from the current number of 15 countries, to the 25 contemplated in the near or medium term, will bring about a greater dependency on external energy, at least in absolute terms.
 - ✓ The population of the European Union will increase by some 45% (more than 170 million persons), reaching a total figure of some 550 million people.
 - ✓ The production of primary energy of the 10 countries wishing to join the European Union is equivalent to 60% of the consumption of energy, and, at present, they have to import more than the equivalent of 130 million tons of oil. Of this primary energy production, more than 60% corresponds to coal.

- ✓ The per capita energy production of these 10 countries is the equivalent of 2,000 kg of oil, scarcely 50% of that of the current European Union (4,000 kg).
- ✓ The real convergence of these new Member States will bring about greater increases in their demand for final energy and, consequently, a greater dependence of the European Union on external energy sources.

The energy options of the European Union, conditioned by the phenomenon of globalisation and the future enlarging of the Union, require the updating of a new reference framework for the energy market and, at the same time, the liberalisation of the sector, respecting the ever increasing demands in environmental matters.

In accordance with the European Commission, the strategy to be followed must be defined by the following guidelines:

- ◆ New orientation of the supply policies, through actions based on the demand.
- ◆ Promotion of a change in the behaviour of the consumers, with special attention to the inclusion of “fiscal instruments” to guide the demand towards more accessible energy sources and ones which are more respectful of the environment.
- ◆ Priority in the fight against global warming through the development of new, renewable energies with the following objectives for 2010:
 1. Duplication in its share of energy production (from 6% to 12%).
 2. Increase in the contribution of the production of electricity from 14% to 22%.
 3. Establishing of reinforced devices for hydrocarbon reserve strategies and new import routes.
- ◆ Analysis of the medium term contribution of nuclear energy. An analysis which should emphasise global warming, the increase in the security of the supply and its contribution to sustainable development.

Within this framework, nuclear energy becomes vitally important if we wish to find an answer to the economic, social and environmental demands.

Evident proof of the new current of thought which can be seen regarding the use of nuclear energy is the resolution by the European Parliament concerning the security of electrical energy in the member States which supports the tendency towards the use of fuels which do not emit CO₂ and “especially the generation of electricity using nuclear power”.

As stated by the European Parliament, the option for nuclear energy is one of the five means of rebalancing the supply policy together with energy saving, taxes, renewable energies and new power stations which are free from coal. Nuclear power currently accounts for 35% of the electricity consumed in the European Union.

To sum up the foregoing:

Having security of energy supply is important, but what is just as important is how you maintain it. So, the energy mix has to be right. Coal may be cheap, but if you burn too much of it, the environment will suffer. If you rely too much on oil and gas, and their prices rise, generators and consumers may be hit by higher electricity prices, and the economy may suffer. If you rely too much on renewable energies, you may benefit environmentally, but the supply may not be reliable.

It would be wrong for me to say that nuclear power is the answer. There is no one single energy source that provides the answer. The answer lies in having a versatile and flexible range of energy sources to guard against the problems I have just mentioned.

Europe is not well endowed with indigenous energy sources. For that reason, Europe has to use every practical option for electricity generation. Some may try to narrow down the debate to a choice between nuclear OR renewable energy, as both are non-polluting. However, I believe we must keep an open mind about every energy source. Nothing should be specially favoured or discarded, if we are to continue to generate electricity economically and in a way that has the least impact on the environment.