INTERWIEW

Antonio GOMIS SÁEZ

General Director of Energy

In November 1997, the Closing Session of the 23rd Annual Meeting of the SNE was honored by the presence of Antonio Gomis, who had occupied the post of General Director of Energy since September.

In this international issue, which is being published just when Spain is entering, as of January 1, a new framework of open competition in the electrical sector, the General Director's position and presence are of great importance and interest..

Antonio Gomis graduated in Chemical Science from the Universidad Complutense in Madrid and has a diploma in Corporate Management from the IESE. He began his professional career in the Puertollano oil refinery (Ciudad Real), and later went on to work first in the OECD's International Energy Agency in Paris and then in the Spanish Ministry of Industry and Energy as adviser to the General Secretary of Energy and Mineral Resources. He joined the National Institute of Hydrocarbons in 1986, where he was director of the International and Institutional Relations Division of Repsol, SA. He has occupied the post of General Director of Energy of the Ministry of Industry and Energy since September 1997. He is a Board Member of Empresa Nacional de Residuos Radiactivos, SA (ENRESA) and Compañía Operadora del Mercado Español de la Electricidad, SA.

January 1, 1998, marks the beginning of a new phase for the Spanish electrical market, which has now been opened up to competition. The main elements of this new framework, in which Spanish enterprises and the Administration must begin to define their courses of action, are the separation of the generation, distribution and transport businesses in the electrical utilities, generation offerings under a market system, liberalized construction of new facilities, and progressive market deregulation to allow consumers to choose their supplier,

According to the General Director of Energy, the electrical sector's framework of reference has undergone profound changes since January of this year when Law 54, approved in mid-November 1997, and subsequent decrees, approved on December 30, took effect and enacted the Electrical Act and a wholesale market. This Act brings together a whole series of regulations that already existed in Spain, some of which date back to the decade of the 20s.

"Of the basic principles, the first establishes the freedom of choice and implementation of the site on which utilities wish to install their generation units.

"The second defines the freedom of choice of raw materials, with the exception of coal which, due to its special characteristics, is governed by the Mining Plan.

"As for consumers, this Act provides for freedom of choice, although in the first stage only the so-called "qualified consumer" (more than 15 GWh/year) will have the right to select the utility and contractual terms. The important thing is that this paves the way for establishing the consumer's freedom of choice over a period of ten years.

"Another important point is the establishment of a wholesale market in which producers must compete and fix their generation prices on the basis of marginal cost criteria, i.e. the lowest possible price sufficient for supplying the forecast electricity demand will be the one that will provide payment for the entire generating sector. This is a fundamental difference with regard to the system in force before January 1st. Its intrinsic purpose is to achieve generating efficiency and also a reduction in the rates to be paid by consumers, since any improvement in the electrical bill will result in industry competiveness and thus in a reduced impact on CPI.

"However, it must be taken into consideration that a system based solely on marginal cost could work against the long-term safety of the energy supply. Therefore, this Electrical Act establishes gradual coverage during a time frame of ten years that, while requiring competition in generation, recognizes the so-called Transition to Competition Costs, estimated at 1.9 billion pesetas, for facilities that required heavy capital investments to build and that at present are still being amortized.

"Therefore, with decreasing prices in the years to come, competition in energy generation and a certain ability to dampen the harmful effects that the establishment of marginal cost-based prices could cause in the short term, it is assumed that the Spanish electrical sector will be able to switch from a fully regulated system to a free competitive system. The year 2007 is the end of the transitory period defined by the Act, with an intermediate point in 2001 to review the entire system."

The liberalization process in Spain has been carried out much faster than in other countries. For example, there were plans for Spain, Holland and the State of California to implement this system at the same time, but Holland has put it on hold and California has extended the deadline for two years. According to Antonio Gomis, "the Spanish market has positioned itself amont the leaders of liberalization. Even the experience in the United Kingdom is not complete, as neither Scotland nor Ireland has joined it."

Of all the generating plants, the so-called self-generators - plants that consume the energy they produce and sell only the surplus to the grid - achieved significant volumes in 1997 which amounted to more than 10% of total Spanish production. In the General Director's opinion, "all generation plants must offer something, as this is one of the guarantees that the marginal price will be the right one, thus preventing formation of interest groups. However, the supplies of certain plants, such as the so-called renewables (wind, miniplants, solar, etc.) and self-generators, represent a special situation, since they must be purchased by the pool and the resulting price used as a reference for payment but with allowances for special premiums. This gives rise to a special system, the same as for coal within the raw materials. At this time, the Ministry is developing a Regulation that will define the premiums to be applied in each case. We must remember that certain technologies that require time to mature, a certain level of subsidies and promotion by the state must be protected in some way, because otherwise the market would not pay for them and thus they would never evolve.

"In any event, the Act clearly states that in order for self-producers to take part in a special system, depending on generating power, their own minimum consumption must be between 30 and 50%."

NEW FACILITIES

One of the most outstanding aspects of the new Law is the freedom to propose and build new generating facilities by any company that considers it of interest from a business perspective. However, a slowdown in demand and surplus capacity seemed to indicate that there would be no special interest in building new installations.

On refuting this idea, Antonio Gomis affirms that "at least on paper, we are observing moves by companies to position themselves by reaching agreements with autonomous authorities to install combined cycle plants in Andalucia, Santurce and Navarra. To what extent will all or part of them be implemented? This is precisely what the competitive market will determine. The market rule is demand, and the most efficient facilities will be the ones that will succeed and displace the less efficient ones. In this respect, the most important thing is to make timely business decisions, so that new facilities are commissioned early enough in order to be able to form part of the base and guarantee a high number of operating hours, thus supplanting other capacities that take part only because of lack of competition.

"The switch from centralized planning to an indicative system is one of the most significant provisions of the Law. The Spanish administration will no longer be saying "I need so much power in so and so place", but rather will be providing general indications of energy policy, and it will be the companies themselves, not only Spanish ones but also foreign firms willing to invest in the Spanish market, that will have to set the guidelines. Therefore, the market has been opened up to new players that do not necessarily have to be electricity suppliers, such as in the case of Natural Gas which has apparently reached an agreement to install two combined-cycle plants, whereby the company importing and marketing the gas can become a new, autonomous generator."

NUCLEAR POWER WITHIN THE NEW FRAMEWORK OF COMPETITION

The new market requires that generating facilities offer their energy at a competitive price and become a part of the operator, which ultimately decides the price. As a general rule, nuclear power plants have low operating and maintenance costs, which almost for sure guarantees their inclusion in the supply. However, we are interested in knowing how to address the fact that a nuclear plant operates within the base system. According to Antonio Gomis, "the basic problem, the peak or valley at this time, is being determined by the type of offerings made by the electrical utilities, accounting for all their generating sources and their interest in optimally exploiting their resourses. As a general rule, if the energy is to be accepted by the market, the owner sends it with a zero reference price, which we call the accepting price, to ensure its entrance into the market. This is one of the fundamental differences with the centralized planning or cost acknowledgment model, in which the optimum is fixed on the basis of a centralized model decision process, whereas with the new system the optimum is fixed on the basis of a series of offerings."

In this new market, we are especially interested in knowing the Ministry's opinion of the role that nuclear power will play. In this regard, the Deputy General Director of Nuclear Energy, Javier Arana, says that "nuclear energy in Spain accounts for approximately one third of total national electricity production. Capacity and availability factors rank among the highest in the world; during the last ten years, the average capacity factor has always exceeded 80%, which reflects the functional stability and consolidation and maturity of operations.

"On the other hand, the average age of the Spanish nuclear park, if we exclude the two first-generation plants, is some fifteen years, which means that it is relatively young. In addition, although there are no plans for new nuclear units, work is being undertaken to uprate power in the existing facilities, on one hand by improving secondary performance through turbine and steam generator replacement programs, such as the ones in the Almaraz and Ascó power plants which have attained power uprates of approximately 175 MW, and on the other by increasing the thermal power generated in the fuel, as in the case of Cofrentes. There is no doubt that these economically achieved power uprates are very advantageous, because the costs of modifications are more than compensated by the returns.

"It should also be noted that the initial assumptions regarding plant design life are proving to be very conservative, due both to the transients considered and to the computational methods. There is an

international consensus that the lifetime of a plant can extend considerably beyond its anticipated economic and design lives. In this sense, since the early 80s, Spanish nuclear power plants have been increasingly interested in improving lifetime management of their facilities, in order to guarantee safe operation until they reach the end of their design life and at the same time keep open the option of life extension. As a result, we can anticipate a long operational time frame for the current Spanish nuclear park as a whole.

"On the other hand - Javier Arana adds - for the last decade Spain has been taking part, through the association of electrical utilities UNESA, in the world's major advanced reactor design programs. Specifically, we are taking part in the European advanced plant program and, through EPRI, both in the passive plant and evolutionary plant programs. Besides preparing the Spanish sector for the future, this allows us to keep the technology updated, which is also a basic requirement for supporting the Spanish nuclear park currently in operation. The recent nuclear power plant proposal to China is good proof of our technological level.

"We should not forget that the national share in construction of the last two Spanish nuclear plants, Vandellós II and Trillo, was around 85%, which is evidence of the capability that we had at the time. In addition, the Spanish industry has succeeded in establishing a presence abroad when the national situation no longer required new facilities; it has joined programs such as PHARE and TACIS for the East European countries, thus preserving a leading-edge technology that can be exported at the highest levels."

"In this area - Antonio Gomis affirms - we are all participating. On one hand, the Spanish Government is promoting international collaboration, but obviously the nuclear industry must have the will to internationalize. This should not be considered as an obligation of the Government, but rather of the industry as a whole. The Spanish nuclear sector is very important worldwide, as we are on the front line of development, and maintaining this position will depend on what we all do together.

"As regards the future, I do not believe that we should neglect any option, because if we analyze the recent conclusions of the Kyoto conference or the very long-term (100 year) studies being carried out by MIT, the obvious conclusion is that nuclear power will be of major importance in the future, especially if the aim is to achieve sustainable economic development on a global scale.

"If we focus on the present, we are experiencing in the West a situation of rejection of or very little interest in new nuclear investments for a number of reasons. Nevertheless, it should be realized, for example, that one of the main reasons that CO_2 emissions have not increased above their current levels in the last few years has been the nuclearization of current energy producing plants. Therefore, governments in general and the Spanish government in particular should not close any of the possible doors and should, to the greatest possible extent, keep all options open."

R&D IN THE NEW CONTEXT

The opening up of markets and the new competitiveness may require budget adjustments that could have a major influence on funds allocated to an area as important as R&D.

With regard to this issue, Javier Arana says that "liberalization is creating a certain amount of concern in the world that pressure on production costs will have negative repercussions on plant safety. This is one of the most important topics of debate in international forums, especially among regulatory bodies. To prevent this, research activities must continue to receive top priority. Proof of this interest is the signature in Spain a few months ago of a four-year agreement between the Spanish regulatory authority and the electrical sector, which commits 1,200 million pesetas (8.5 million dollars) to development of projects of mutual interest in the area of nuclear safety and radiation protection.

"In addition to this agreement, we should also mention ENRESA's (Empresa Nacional de Residuos) R&D program, which has a budget of 7,000 million pesetas (50 million dollars) over four years. And obviously we should not forget EURATOM's Framework Program, in which the Spanish industry is also participating."

In regard to this issue, the General Director affirms that "in research, the important thing is not monetary value, but rather being in the right place with the right person at the right time, i.e. it is more a question of management than money. An example of this is our recent decision to take part in the Chernobyl sarcophagus project; although we are not in the Group of Seven, we are going to contribute the resources required to be part of the Assembly of Donors."

RADWASTE IN SPAIN

A few days before this interview, the Vandellós II nuclear power plant, which was closed in 1990 by order of the Ministry of Industry after a fire broke out in its conventional facilities, was transferred to ENRESA's control, once the Ministry had approved the dismantling plan proposed by this company and received a favorable report from the Spanish regulatory authority.

Therefore, if radwaste management is one of the issues most thoroughly addressed by the sector and most contended by opponents of nuclear power, at this specific time it is also important news for the Spanish Industry.

According to the General Director, "the decision to authorize the decommissioning and name ENRESA as the responsible operator should be analyzed at length, especially if we consider that there is little experience on an international scale with commercial reactor dismantling. This involves the advantage of being one of the first and the disadvantage that the whole world will be watching. The problems that will surely arise in the years to come will have to be solved, but this will serve to devise solutions that will allow us to stay ahead of other competitors, though a maximum of rigor must always be maintained in all stages."

As regards the more general situation of radwaste management in Spain, low- and medium-level waste are stored in ENRESA's repository in El Cabril (Cordoba). As for high-level waste, the Senate is currently discussing a report between all the political groups. According to Antonio Gomis, "this is not only a Spanish problem, but rather a problem of all countries that generate nuclear power. As an Administration, we are hopeful that the report under discussion in the Senate will be approved, as it will provide a framework of reference and pave the way to be followed in the years to come. It is important that a consensus be reached among all political parties, since the type of actions to be taken will be very long-term.

"On the other hand, the need for information is more than obvious, since society's special sensitivity to the issue of radioactivity is often caused by fear, by lack of knowledge. We are discussing different alternatives such as deep geological storage, reprocessing, transmutation, temporary storages, etc. If this political consensus is achieved, it will be easier to carry out certain activities, such as research work if required, and agreements with city councils, autonomous regions and municipalities. Also, from the point of view of public opinion, it will be easier to realize that the adopted solution is the best one available if all political representatives have reached a consensus on this issue.

Antonio Gomis does not indicate the exact date on which approval of this report is expected, but he does say that "we are working internally on the assumption that this issue will be of top priority in the forthcoming months. In any event, I repeat that the most important thing is that the decision be made on a consensual basis."