

INTERVIEW

ANTONIO COLINO MARTÍNEZ

President of ENRESA



*T*he professional career of our interviewee covers a wide range of activities related to energy production in both Spanish and international enterprises. Antonio Colino has been a member of committees and work groups concerning energy and economic issues and a professor of OIEA courses, and throughout his professional career he has discharged different duties related to nuclear and coal-fired power plant projects. Up to 1995, he occupied the post of director of advanced nuclear power plant programs, and until he was named President of ENRESA he was the coordinator of the SEPI-British Energy-Westinghouse alliance for international projects.

To his thorough knowledge of the sector, Antonio Colino adds two very outstanding qualities - his humanity and easy manner - which remind us of the interview that we had

the fortune of holding almost seven years ago with his father, Antonio Colino López, a pioneer of the Spanish nuclear industry.

It was precisely his father's generation that introduced the use of nuclear energy for peaceful purposes, and our country was one of the first to embrace the new technology as soon as it appeared.

In the words of our interviewee, "Spain has been in the nuclear energy field from the very beginning, and always above the average ranking (fourth or fifth in the world) that we occupy in other industrial sectors (where we rank in ninth or tenth place)".

THE EXPORT CHALLENGE

Even though no new nuclear power plants have been built for several years now, our

country still maintains a very high technological level, as a result of experience gained in the thirty years of its history. Antonio Colino says that "every year our facilities still rank among the best in the world, and our country is one of the leaders in capacity factor and production. As a result, we still have sufficient critical mass to approach new markets where energy production is constantly increasing and offer them our knowhow and technology.

"However, we should bear in mind that many professionals have left the Spanish nuclear sector, many companies have disappeared and the time is nearing when, if we do not obtain any projects abroad, we will begin to lose this critical mass. The budgets that Spanish enterprises must devote to transactions required to present projects in distant countries are of such a magnitude that it is often difficult to undertake them alone.

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"In this respect, it is obvious that Spanish enterprises cannot compete by themselves in the international market. Also, to make a nuclear power plant work is not only a matter of designing it, building it or purchasing equipment, but rather requires extensive experience in operation, financing and negotiation with the authorities. This requires the greatest possible concentration of knowhow". Spanish enterprises, aware of the new challenges they were facing, began some years ago to seek new business alternatives. At present, in Antonio Colino's opinion, "we have a

good market in the Hispano-American countries, with which we maintain good relations because of language, customs and traditions. As a result, we have a very strong presence there. However, we should remember that we have never had to compete with the large companies of world powers, which to a certain extent is a very captive market.

"On the international scene, the big market today is China, which has energy programs based on an additional 15,000 MW of power every year. And they are carrying out these programs, which means that, at this time, around 100,000 MW are under construction (we have 45,000 MW installed in Spain). The 15,000 MW include coal, hydraulic, oil and some nuclear. If 1,000 nuclear MW are added every year, it is obviously a tremendous market, and for this reason all countries are involved there. The Chinese have already signed contracts with Canada, Russia and France and will do so shortly with Korea; in addition, they have their own technologies. At this time, a Spanish consortium is designing and building a coal-fired power plant, which to date is the largest operating contract signed between Spain and China".

“Spanish enterprises cannot compete by themselves in the international market”

Antonio Colino's most recent responsibility in the nuclear sector has been to coordinate the international alliance for nuclear projects between companies from the SEPI group, Westinghouse and British Energy. We asked about the reasons for creating and the origins of this alliance. "When the Spanish nuclear sector realized that our companies could not enter foreign markets alone, especially when we compared them to companies from countries such as France, Germany or Sweden, we considered, from Spain's public enterprises with nuclear projects, the possibility of seeking a supplier as partner. We approached Westinghouse, whose last European plants were Vandellós II in Spain and Sizewell B in England, for the purpose of offering, with the permission of both owners, 1,000-MW units based on Vandellós II and 1,300-MW units based on Sizewell B. This was the beginning of the relations between British Energy and the INI, which is how we came to create the so-called Alliance between Westinghouse, SEPI and British Energy.

"This course of action was well looked on by Chinese institutions, since they have been able to confirm in situ the technology transfer process that has resulted in a constant increase in national participation. In fact, in our country's first-generation nuclear power plants, national participation was 45%, in the second generation it increased to 60-65% and in the last generation it reached 86-87%, with the creation along the way of companies

such as ENUSA and ENSA and having leveraged engineering firms and other companies such as Tecnatom".

As a result of the successive contacts maintained with Chinese authorities and after seven years of negotiating and submitting Spanish projects, Antonio Colino says that "in June of last year an agreement was signed with the three main engineering firms in the Shanghai area, which are going to develop a Chinese prototype of a 1000-MW nuclear power plant based on Vandellós II. Spain will supply all project information, and the Chinese will be in charge of including in the design the modifications that have been made in the last fifteen years, and also of licensing. It should be noted that in China the utilities, engineering firms, Ministry and Regulatory Body are state owned and are connected to the China National Nuclear Corporation (CNNC).

"Obtaining this project would mean a Spanish share of 35-40%, which would amount to more than 150,000 million pesetas, in addition to the technological repercussions that this would entail for the Spanish nuclear sector and the possibility of survival. This activity is serving as a "spearhead" for opening new markets, but we should not forget that due to its technological and strategic component, this major import operation being considered by China has a strong political dimension, and therefore it could not possibly materialize without the solid support of the Government, as has occurred with companies from countries such as Germany, France or United Kingdom. In any event, I think that it is essential to maintain the technological level reached by Spanish professionals and firms throughout thirty years of experience, which ranks us among the leaders in terms of production capacity".

ENRESA. FUTURE PROJECTS

At the time this interview was held, Antonio Colino was beginning the first months in his post of President of ENRESA. However, his performance has already led to concrete actions.

"Bearing in mind that the company works well in the technical areas, we have "stirred" things up a little to eliminate tensions that have been accumulating over its twelve years of life without making major changes. A new initiative has been to create the direction of External Affairs, which is a technical department that includes three major sections: the Communications Management, which we have promoted in a special way because of the weight that this section has in our company; the Department of International Relations; and the Department of Institutional Relations. It was decided to concentrate our efforts because of the considerable challenges that we face on all fronts at this time, especially the communications effort that will require

informing public opinion of the conclusions regarding radioactive waste management that come out of the Report of the Industry and Energy Committee created in the Senate.

As regards concrete actions that the Company is developing at this time, I should mention first the forthcoming approval of the Fifth General Waste Plan, which establishes ENRESA's courses of action in the years to come. When its approval is made public, we will inform our readers of the most important aspects. However, the issue that is generating the most interest at different levels of the technical world and the national policy establishment is the search for suitable sites for waste storage. For this purpose, the so-called "Report on the Study of Problems of Radioactive Waste in Spain" has been created and is being prepared in the Senate's Industry and Energy Committee.

It is interesting that the report has been created because representatives of the political parties have become aware that they must intervene to resolve the problem. "The aim is to know what regulatory channels are required to be able to effectively carry out the technical work. We do not want a Party or Government solution, but rather a State solution that provides for the most suitable strategies to resolve the temporary and definitive storage of these wastes. The Senators are organizing the activity program and studying what bodies and institutions will be called upon, including naturally all environmental parties and organizations, Universities, Royal Academies, Science and Research Institutes, Autonomous Regions and City Councils.

"An international model is the law approved in France after many years of debate. Christian Bataille, a Socialist congressman from the North Department, was the principal negotiator. Once it was approved, the next conservative government authorized him to negotiate enactment of the Law with the City Councils that voluntarily expressed an interest. Seventeen municipalities have already done so, and of these four have been selected and in three of them geological laboratories will be built to develop in situ research.

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"The big difference is that until now, we have been analyzing the whole Spanish map with the ultimate goal of reducing it to down to one point. At this time the reduction is approximately half done, and it is here that we have realized that the most important thing is not the technical part, since a priori

many sites may meet the requirements, but rather social acceptance. Therefore, we have decided that instead of continuing with more and more in-depth technical studies, we will wait for the conclusions based on the Senate's Report. This will allow us to select the most suitable sites based on a general consensus. We know that there are 1,000 possible points in Spain, some with more difficulties than others, but all of them are feasible. Therefore, we have halted the process for now and will wait for the Committee to complete its studies, and with the State, considering the technical information developed by ENRESA, we will be able to evaluate the suitable sites. It is a matter of convergence from below, between the politicians and towns that may be receptive to this idea".

“At this time, there is no movement, at the international policy level, to execute a worldwide deep storage”

The President of ENRESA also refers to other fronts of action in the company: "As regards the El Cabril storage center in Cordoba, all the authorities have accepted its construction and operation, having considered that it contributes to the welfare of the remaining Spanish provinces. In face, the operating permit has been renewed for five years - from October 1996 to October 2001. Moreover, El Cabril is a technological reference for tenders that we may submit abroad, such as the case in China that we commented on earlier.

"There is another issue pending approval by the Ministry of Industry and Energy: authorization to use the dual-purpose dry container for storing fuel from the Trillo nuclear power plant. The CSN has already issued a favorable report, which means that it can be considered as almost approved. System validation is very important in order to apply in Sapin a temporary, very flexible and modular storage. Except for Trillo, all the plants have been installing high density racks in the last few years to store spent fuel, and in 1997 and the first quarter of 1998 installation will be completed in the last Spanish plants. Thus, all the plants will be more or less equipped until the year 2011, except for



Trillo where pool capacity could not be increased because of its German design. Therefore, it was decided to make a temporary storage just for this plant. We now have all the authorizations, except for the building construction permit which we hope to obtain soon.

"Decommissioning of Vandellós I is also underway, where we will become the liable operator as of the month of April. In short, we continue with our projects in progress".

The issue of the radioactive lightning conductors, which caused what we thought was such an unnecessary controversy when they began to be dismantled, has now been resolved. ENRESA has received 17,000 requests and 17,000 conductors have been removed. If any remain, they will be dismantled as the petitions are received.

As regards final storage of high-level waste, the former President of ENRESA, José Alejandro Pina, expressed his opinion in several communication media, including our magazine, regarding the advisability of reaching a consensus on installation of a single, international Deep Geologic Storage. Because of its obvious importance, many comments on this subject have been made, and in this regard Antonio Colino clarifies his position.

"This idea cannot be accepted for the time being. This approach is comparable to saying that since perhaps, 50 years from now, an international police force will be created, we should eliminate now the Madrid, Barcelona or Valencia police force. Until this police force exists and is operating in the different cities, we cannot do without the force we have now. In other words, for the time being, we must continue with the scientific and technological studies that are underway: Temporary Fuel Storage, Deep Geologic Storage, participation in all experiments in progress with the energy amplifier and actinide incineration, etc. If in the future this issue is actually

solved in this way, we will be only too pleased to accept it, but at present nothing has been done concerning this matter and thus we cannot halt our activities in any course of action. This is clearly a top international policy issue that we can neither define nor change immediately. In addition, it could cause unnecessary and inadvisable international conflicts and friction.

"Sweden is one of the most advanced countries in DGS; it is building a model, but as a result of this approach the Swedes are now divided into two groups: the ones that think that what

they are building is going to be a deep storage for the whole world, and those that think that why spend the money if some other country is going to do it. It is true that we must take advantage of the inertia of different countries to advance in R&D, but at this time there is no movement to execute a worldwide deep storage".

In this sense, and with reference to the conclusions of a seminar that was just held in USA, Antonio Colino comments that "since the DOE cannot remove the spent fuel from the nuclear power plants in 1998, as provided in the Nuclear Waste Law of 1982, all the plants will be going in the direction of a temporary in situ storage, whether the containers be concrete, metal or both, single- or dual-purpose, etc. Moreover, there are private proposals in the United States to build a surface fuel storage for several plants. It is precisely in this country that waste management is creating situations that we should be aware of. At present, forty-six states and thirty-three utilities are lodging complaints against the DOE because it has not fulfilled its commitments. Twelve billion dollars have been collected to date for this action, but the solution does not seem to be attainable by the committed date.

“Temporary storage is seen as at least a medium-term solution for waste management and, in the long run, for storing them definitively”

"In any event, I stress that our position is to carry on working and to collaborate with similar organizations around the world to reach a consensus and find the best solution for waste storage".