



Francisco Martínez Córcoles

*President of the Spanish
Nuclear Society
General Director of
Iberdrola Generación*

Francisco Martínez Córcoles, an expert in energy businesses and, in particular, in electric system operation, has been General Director of Iberdrola Generación, S.A. since 2001 and is a member of Iberdrola's Executive Committee. In addition to his overall responsibility for production activities and the purchase and sale of electricity, he is president of UNESA's Nuclear Energy Committee. He has been president of the Spanish Nuclear Society since February 2003.

"The Spanish plants continue on a path of **SAFETY, RELIABILITY and EFFICIENCY**"

The president of the Spanish Nuclear Society provides an interesting summary of the Spanish electric energy generation system, focusing on an evaluation of present and future prospects of nuclear production in our country.

Faced with the new and growing needs of consumption, Martínez Córcoles stresses the virtues and strengths demonstrated by our energy generation system, and at the same time analyses the serious incidents recorded in other

countries. As regards nuclear, he reaffirms his support of serious, fluid communication between the different sectors of society so that it can knowledgeably speak of effective solutions to the demands for consumption.

Francisco Martínez Córcoles says that the experience of working in the SNE is rewarding. "When I joined the Society, I was impressed by the members' generosity and their enthusiastic participation, which reaches levels that are quite rare in professionals

associations of this type". The president also stresses the excellent academic training of the Society's members. "Their active, fruitful participation in different events, from Nuclear Thursdays to the annual meeting, is evidence of a high degree of commitment".

“
The SNE is noteworthy
for its members’
generosity
and enthusiastic
participation.
”

A NECESSARY INFLUENCE FOR SUCCESSFUL DEVELOPMENT

Martínez Córcoles also says he is concerned about the problems of generational changeover. “When one sees ‘the color of hair’ of most of the Nuclear Society’s members, including myself, one cannot help being somewhat concerned”, he says, acknowledging the fact that this collective is in an advanced stage of its professional career. As a result, some members are gradually leaving relevant positions in the decision-making realm, which means that young people should be hired so that, with time, they can take over from their predecessors.

“We would all like to live in a world in which pure intellect is the primary driving force but, even in a society of professionals and not of enterprises, this is just not so. Sufficient resources are needed to maintain and promote the Society’s activities, and acquiring these resources requires that its members have a certain decision-making capability”. Martínez Córcoles also refers to the desire of professionals to exert their influence on shaping the future “in a way that we believe is the most beneficial for society. To do so, ideas – a product of intellectual solvency and experience – must be put on the table”. He also stresses his personal commitment to the Nuclear Society “even before taking over as president”, and he defines himself as a “strong believer in the benefits of nuclear technology from a knowledge of the electrical system”.

SAFETY, MUCH MORE THAN A PREMISE

The president of the SNE denies that safety and optimization are conflicting terms and claims that “in any walk of life, and certainly in nuclear, the best, the foremost, are the safest, and there-



fore the path towards optimization is none other than the path of safety”, stressing that this must be a “well understood” safety.

Martínez Córcoles praises the safety “of one who does not balk, who acts”, as opposed to a poorly understood safety that ends up leading to hibernation. “When one acts safely, one ends up being the best. It is obvious in the world that the best nuclear operators are the ones who, in turn, have the highest safety standards”.

THE CHALLENGES OF NUCLEAR POWER

In the area of electricity production, nuclear technology faces a series of challenges that could be analyzed from three perspectives: people, installations and organizations.

In relation to people. Martínez Córcoles recalls the need to renovate and to acknowledge the staff. “The last nuclear power plant that was put into service was in 1988, and we must remember that 16 years add up to a good part of one’s professional life”, he says. “Those who leave should do so under economic and personal conditions that acknowledge an impeccable professional career. Those who stay have the possibility of improving, and those who

“
The path towards
optimization
is safety.
”

arrive are offered a tremendous professional opportunity”. Even if no new plants were built in the short term, the current plants have more than 40 years of work ahead of them, “and therefore the people who start today would be retiring before their planned lifetime ends”, he says.

In the same way, the president of the SNE says that the continuous industrial risk prevention programs “are a key element in all plants in general, and in particular in nuclear plants, to successfully achieve the primary goal of *zero accidents*”. From his experience at the head of Iberdrola Generación, Martínez Córcoles underlines the undisputable benefits entailed, in matters of safety, by a mentality of not ignoring any assumption. This principle of action has allowed for promotion of programs such as ‘Reconciliation of Personal, Family and Working Life’, with the conviction that “personal facets must be cultivated so that a professional balance can be sustained in the long term”.

As regards the policy of early retirements, he says “this helps confront the challenges faced by the sector in a controlled way”. He is opposed to assuming that all people should stay on until they are 65 in jobs that are physically difficult and subject to the pressure of shifts and the hard work involved in maintenance or refueling. “It is obvious that, if you can control that process and move it forward 10, 7 or 5 years, you are siding up with safety”. He also understands that early retirement should involve adequate economic conditions and be considered at reasonable ages.

In relation to installations. The main challenge in relation to installations is effective life management. Martínez Córcoles says he is convinced that the nuclear power plants can operate in the long term, “because they are designed for that and they are being managed for that”. In this respect, he claims that the effective design life of the plants is enormous and, although

“
Management,
evaluation
and innovation are
the optimum approach
for achieving
the generation objectives
of plants.”

theoretically it is fixed at 40 years according to U.S. technology, the Americans themselves are extending licenses up to 60 years as the plants are designed to safely perform during that period. “This is possible if each and every one of the critical structures, systems and components comply with the trio of safety, reliability and efficiency, and therefore our work focuses on monitoring, tracking and investing in continuous renovation”.

He also proposes technological innovation as a way to take advantage of all the technical advances, putting them into practice in plants and maintaining them at the cutting edge of technological development. Incorporation of digital instrumentation into control systems is an example of the safety with which consistent plant management can be achieved, as Martínez Córcoles affirms. “Management, evaluation and innovation are the optimum approach for developing programs that permanently guarantee that plants can achieve the objectives for which they were designed”, he says.

In **relation to organizations**. The third front of response to the current challenges of nuclear power are the organizations: “source of a good part of the major occupations – more than preoccupations – of we who are heading companies that produce electric energy with nuclear reactors”.

Within organizations, Martínez Córcoles differentiates between management systems, the regulatory process and the communication process with society. As regards management systems, there is a need to encourage efficiency by giving the most adequate treatment possible to human factors, so that own and other experiences are translated into a continuous



broadening of expertise. The president of the SNE insists that care with this aspect effectively contributes to prevent worker discouragement.

As regards the regulatory process, he stresses the advisability of applying the probabilistic safety assessment in the same way to demand management and to the electrical system. “Determinism is very sound, but it should be complemented with risk-based information. If we assess everything that can happen and we determine our actions with the sole objective of avoiding any risk – regardless of its probability – we would end up not acting at all”. Therefore, Martínez Córcoles says this reality must be addressed – based on determinist grounds but informed by risk assessment – during the regulatory process.

COMMUNICATION WITH SOCIETY

Cultivating mutual trust, avoiding unnecessary alarmism and ensuring informative transparency are the major challenges faced by organizations. “The communication media publish numerous alarmist comments on nuclear power plants that are bereft of any scientific rigor”, the SNE president claims, and he is sorry that visions of nuclear and electric utilities as organizations that provide a service that is so necessary and highly demanded by society are so rarely seen.

“
An informed debate
is needed in which
society can express its
energy needs.”

Martínez Córcoles stresses the need of de-dramatizing communication. “The contradiction – he says – comes when one wants to have a permanent source of light but does not want to pay for it, or assumes it can be generated from energies that cannot satisfy the current demand”. He maintains that all actions should be based on truthful, transparent information and that “an informed debate is needed, in which society expresses its energy needs so that energy utilities can serve them with a solution most suited to their demands”.

This debate must categorically affirm the possibilities of nuclear as “an abundant, safe, economic, reliable, non-emitting and very technologically advanced source of energy”.

THE ELECTRIC SECTOR. LIBERALIZATION AND PROSPECTS

The electric market in Spain, which was liberalized six years ago, has become a reference on the European

The keys to sustainable development are a safe supply, defense of autochthonous resources, and environmental, economic and technological efficiency.

scale because it is pioneering and because of its adequate response to the strong rise in demand. "The balance has been positive in these six years", says the General Director of Iberdrola Generación, who adds that "an open market is not a trivial thing; you just have to look at other countries, where the same experience did not have the desired effects".

Martínez Córcoles stresses the fact that the market in Spain has succeeded in accommodating major changes. "Electric demand since the market was liberalized has increased almost 35% and we are growing at a sustained rate of 5% a year", and at the same time responding to a peak demand increase of 50%, "which merits an acknowledgement of the virtues of our electrical system".

As regards the price of electricity, Martínez Córcoles says it is self-evident. "Consumption grows 35%; the peak increases up to 50%; we pay 35% less; and the competitive market can assimilate this, which does not happen in countries that are theoretically more advanced than ours".

In addition, he says that he does not agree with the system's detractors who argue about lack of competition. "Without leaving our country, the Spanish consumer can choose between Iberdrola, Endesa, Unión Fenosa, ENEL, EDF, EDP, RWE and other new entrants", he claims, "whereas in Portugal practically the only choice is EDP, in France EDF and in Belgium Electrabel. In these cases, and in others such as Italy and Germany, there is a lack of competition in this respect". According to Martínez Córcoles, "the Spanish utilities are on the international front line", two of them ranking

among the 6 largest in Europe and the 10 largest in the world.

THE IBERIAN MARKET

Martínez Córcoles does not hide his concern about evolution of the Iberian electricity market. "On one hand the time frames are short; on the other, there are many doubts to clear up. There is also no clear regulatory goal". Therefore, he stresses the need to provide means to move forward towards utmost efficiency. "The electric market in Portugal has a long way to go, and its situation is far removed from the Spanish situation".

The Iberian market is thus another example of the European lesson that Spain is giving in its drive to implement energy liberalization.

THE END CONSUMER

"It is an error to think that mass supplier changes can be made", Martínez Córcoles says, who qualifies the Spanish rate as "excessively protectionist" and consequently, in many cases, costs cannot be covered, which means there are barriers to competition and a brake on liberalization.

As far as the electric sector is concerned, he believes that the keys to successful development are a safe supply, defense of autochthonous resources – renewable energies, national coal, nuclear power – and environmental, economic and technological efficiency.

As for emissions, Martínez Córcoles says that the nuclear process is capable of generating CO₂-free electricity, "and therefore we should assess the real consequences that the emission of CO₂ is having for society".

SECURITY OF THE SUPPLY

The president of the SNE considers that in Spain, we have an effective instrument for ensuring the supply: a power guarantee payment, which ensures the maintenance and availability of installations.

As regards interconnections between countries, Martínez Córcoles disagrees with the view that "the more the interconnections, the safer the system is". In his opinion, "generation based outside the country for supplying our own consumption raises the risk of supply short-

Powerful, diversified local generation equipment is required to guarantee the electricity supply.

ages", and as an example he cites the recent blackout in Italy resulting from a "problem of interconnections". He says that the powerful Spanish system contributed decisively to putting a brake on the hypothetical extensions, which could have caused the blackout experienced by Italy, if the current means had not been available. "If Spain had not managed the secondary regulation and assumed all deviations of production from France – when faced with disconnection of the Italian system – the situation in Europe could have been worse. Situations of this kind reaffirm our defense of mixed generation systems – of the many possibilities offered in Spain by a good combination of nuclear production, combined cycle and renewable: an unbeatable mix".

Martínez Córcoles insists on the need today of having "powerful local generation equipment, as this need cannot be entrusted to interconnections that were intended more for emergency support than for mass energy transmissions". Therefore, he emphasizes that the economic advantages that could be obtained from them would not justify the absence of efficient local generation.

The latter is the strategy that, day after day, is becoming consolidated as the path to follow in satisfying the growing electricity consumption needs in the country, and at the same time in preventing incidents that could result from failure of a deficient system in a country such as ours. Some clear guidelines are obviously needed for sector evolution, which in Spain is driven by a very solid foundation. The presidency of the Spanish Nuclear Society supports development based on a very clear premise: progress through knowledge and rigorous dissemination of the truth about the benefits provided by the successful use of nuclear power in our country.