

# HELPING TO CLOSE THE GENERATIONAL GAP IN NUCLEAR: THE SEMINARS AND CONFERENCES OF SPANISH YOUNG GENERATION IN NUCLEAR (JÓVENES NUCLEARES)

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## ABSTRACT

As in each country of Europe with nuclear power, there is a clear gap between those generation that have built the power plants in the eighties and the new generations with less than ten years of experience in the nuclear field.

From its creation, Spanish Young Generation in Nuclear (Jóvenes Nucleares) has as an important scope to help transferring the knowledge between those generations in the way that it can be possible. Some years ago, JJNN have started organizing seminars periodically trying to cover as many areas as possible in the nuclear engineering field, and some of them outside the industry but related with it.

Over the last years there have been some really interesting topics, from the communication in the nuclear industry like "How to manage with the journalists?" and "Communication in crisis", through the energy seminars like "The Spanish Electricity Market" to the seminars about the present and the future of the nuclear energy, for example "Past, present and future of the nuclear fuel cycle in Spain", "Uranium for the Nuclear Renaissance", "The firsts AP1000 in China" and "The Nuclear Renaissance in UK". All of the seminars were taught by experts on the issue and the most part of them were very experience people of the industry in order to share their knowledge with the young public that assisted to the seminars, more than 40 people in average, some of them nearly 100.

It has been done also a cycle of seminars called "Chernobyl 2009" with some of the most relevant professionals and researchers of Spain. The seminars included in the cycle were "The base of the original RBMK design. Implications on the Chernobyl-4 accident, introduced improvements", "Effects on the population of the Chernobyl accident", "Chernobyl vs. TMI: searching the root cause" and "Facts and Hypothesis of the Chernobyl "experiment"

The experience of these seminars is highly positive, both for the experienced speakers and the young audience. It is being possible through these seminars to bring the knowledge of the two generation closer and to answer all of these questions that only those who have built the reactors are able to answer.

Based on that idea, it will start in 2011 a new cycle of seminars based on the experience of the Spanish nuclear power plants construction, to bring light and share lessons learned with the generation that will build the new reactors in Spain in the future.

## 1. Introduction

Spanish Young Generation in Nuclear (Jóvenes Nucleares) is a commission of the Spanish Nuclear Society (SNE) which main goals are to spread knowledge over the society about nuclear energy.

Over the last years there have been some really interesting conferences organized by Jóvenes Nucleares, covering topics from the communication in the nuclear industry like "How to manage with the journalists?" and "Communication in crisis", through the energy seminars like "The Spanish Electricity Market" to the seminars about the present and the future of the nuclear energy, for example "Past, present and future of the nuclear fuel cycle in Spain", "Uranium for the Nuclear Renaissance", "The firsts AP1000 in China" and "The Nuclear Renaissance in UK". All of the seminars were taught by experts on the issue and the most part of them were very experience people of the industry in order to share their knowledge with the young public that assisted to the seminars, more than 40 people in average, some of them nearly 100.

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In this paper, some of these conferences will be presented, as well as how they help transferring knowledge between generations.

## 2. Conferences

Jóvenes Nucleares has a long tradition of interacting with the media, that is why the topic of two really interesting conferences promoted by Jóvenes Nucleares was “communication”. To get over the subject, it was a need to find somebody enough talkative and friendly to connect with the audience and this person was Piluca Nuñez, communication director of the Spanish Nuclear Forum. In the first conference, “*How to manage with the journalists?*” she talked about the difficulties that the nuclear energy has in terms of public acceptance. She reminded that one of the problems is the lack of adequate information in the media, which is not always enough clear and reliable. The main goal was to learn how to communicate effectively with the journalists to give the adequate message to them.



Figure 1. Piluca Nuñez at the “How to deal with journalists?” conference

In the presentation some examples and experiences were related to show how difficult can be to give a message of calmness when everybody is trying to find a message of alarm, which is very typical in this field. The conclusion was that is very important to have the message clear before starting the communication to avoid boring or confusing the interviewer with technical explanations that could be not so clear for the people outside the nuclear field.

In the second conference called “*Communication in crisis*”, she focused the attention on how to be efficient in the communication during a crisis, which is especially relevant and useful nowadays. The conference was very popular and well appreciated by the audience, with many interesting questions.

Some years ago, the Spanish electricity market became a free-basis one and Jóvenes Nucleares saw the need of inform to the people about the new situation. In the conference called “The Spanish Electricity Market”, the lecturer Víctor Niharra Hernández, from the Spanish Market Operator, explained the audience with simple words but very clear how the market is composed.



**Figure 2. Víctor Niharra at “The Spanish Electricity Market” conference**

The lecturer talked about the different laws of the market and the comparing between the Spanish Electricity market and some European ones. After the lecture, there was an animated discussion with the lecturer.

As the nuclear Renaissance is becoming a fact, Jóvenes Nucleares thought that it could be convenient to do a series of conferences to inform the public about the different aspects of the nuclear new age.

The first conference “UK and the Nuclear Renaissance” was based on the new ideas of construction in Europe from the perspective of one of the utilities that are going to build plants in the UK, the international Spanish company Iberdrola. The lecturer, Manuel Prieto Urbano, started the lecture talking about the beginning of this new age in UK with the energy planning of the Government in 2008, with the decision of starting the dismantling of the old power plants and the construction of new ones in the next decades.



**Figure 3. Manuel Prieto at “UK and the Nuclear Renaissance” conference**

The main part of the conference was based on the Generic Design Assessment process, which is the licensing basis of the new reactors, very different one from the old licensing ones.

Finally, he spoke about the different energy planning of the political parties, trying to guess if a Nuclear Renaissance is possible in Spain.

The second conference of the “New Age” was about the AP1000 construction in China and the Spanish collaboration through Westinghouse Electric Spain. The lecturer, Miguel Palazuelos, spoke about the challenges and success of the Chinese four unit construction and the lessons learned for the future constructions in Europe and the USA. As the construction is modular based, the making of the equipment and the site works are parallel, so the planning is going very well and it is expected to finish on time.

The third conference was called “Uranium for the Nuclear Renaissance”. In this conference, the lecturer, Francisco Tarín from ENUSA, the Spanish fuel company, spoke about the uranium resources that are actually available and the future perspectives.



**Figure 4. Francisco Tarín at “Uranium for the Nuclear Renaissance” conference**

The key issue was the fact that with this planned development, it will be enough fuel for the future, as there are many unexploited resources that will be used if the uranium is more expensive in the future.

In the last series of thematic conferences, Jóvenes Nucleares faced the big challenge on every debate about nuclear energy. In a project called “Chernobyl 2009”, four different conferences were planned plus a trip to Chernobyl paid by Jóvenes Nucleares.

The conferences were: “Chernobyl vs. TMI2” by Juan Manuel Blanco, “Facts and hypothesis of the Chernobyl “experiment”” by Luis E. Herranz, “Chernobyl: effects on the population” by Eduardo Sollet, “RBMK reactor design and the Chernobyl accident” by Agustín Alonso



**Figure 5. Jóvenes Nucleares at Chernobyl**

### **3. Conclusions**

The experience of these conferences is highly positive, both for the experienced speakers and the young audience. It is being possible through these seminars to bring the knowledge of the two generation closer and to answer all of these questions that only those who have built the reactors are able to answer.

Based on that idea, in 2011 it will start a new cycle of seminars based on the experience of the Spanish nuclear power plants construction, to bring light and share lessons learned with the generation that will build the new reactors in Spain in the future