As Mochovce-3 Nears Completion, Slovakia Regains its Nuclear Momentum

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Nicola Cotugno, general director of *Slovakian utility Slovenské Elektrárne (SK)*, talks to *NucNet* about progress with construction of the *Mochovce-3* and *Mochovce-4* reactors and the role nuclear plays in the country's energy security.

NucNet: You are building two Russia-supplied VVER units at *Mochovce (Mochovce-3* and *-4)*. Can you update us on how construction is progressing?
Nicola Cotugno: *It is going well. We have settled some of the initial problems. When we started building these two reactors, we had to create a certain amount of momentum because it had been many years since a nuclear power station was built in the region. We had to find suppliers, industrial partners and to start working together. It was not easy because quality standards have increased dramatically in the last few years and it has now been about 15 years since our supply chain took part in a new-build project. Slovakian companies were involved in the construction of Temelín-1 and -2 in the Czech Republic, which began commercial operation in 2002 and 2003. Mochovce-3 is 92 percent complete and we are starting the commissioning of some systems. We are approaching the start-up phase, which can take about two years, and the unit will enter commercial operation in November 2016.*

NucNet: There have been reports of cost overruns and delays at *Mochovce-3* and *-4*. Are these reports correct?
Nicola Cotugno: *In November 2014, Slovenské Elektrárne approved a new budget for the project. The two units will cost a combined total of € 4.6 billion. Of course, this is an increase in terms of the initial budget, but we are still in line with other projects around Europe in terms of cost and timeline. We also have to consider that the units use leading technology. From the safety point of view, this will be a state-of-the-art power plant and include all the recommendations that followed the technical debate after the Fukushima-Daiichi accident. Because we are implementing these lessons, we will go beyond the original design, and also beyond the original budget and schedule. But the aim is to complete a nuclear power station with the best available technology.*

NucNet: How important is nuclear energy to the energy security of Slovakia?
Nicola Cotugno: *The nuclear industry has a long history in Slovakia – we have more than 50 years of experience. There is a positive consensus on the need to have nuclear energy. I think the industry in Slovakia has been managed very well and this is the main reason why people see the technology in a positive light. There has been a strong focus on continuous improvements. These improvements can be technical or environmental and this is the way to present to the public an industry which is operating better technologies and offers better solutions. Nuclear is the backbone of energy security in Slovakia. About 65 percent of our electricity is from nuclear power, which is constant and reliable. We reduced the number of days for refuelling and maintenance outages at Slovakia's nuclear stations to less than 100 in 2014, compared to more than 200 in 2006. And we reduced the amount of generated liquid radioactive waste from 161 cubic metres in 2006 to 39 cubic metres in 2014. We already have one of the lowest levels in Europe and with even better technology we are implementing we can reduce this by a further 90 percent.*

NucNet: How important is the new 'Energoland' visitor's centre and what impact has it had so far?
Nicola Cotugno: *It is very important. In the past, these places were called 'information centres,' but this is so much more than that. Energoland is where we want to meet people, listen to them and get them to think about nuclear energy in a different way. We want to explain what the business of the energy sector involves and to let them understand the bigger picture of how nuclear fits into the energy production system.*
Energoland opened in October 2014 and the feedback we have had so far has been fantastic. Even nuclear professionals who visit the centre say that they have started looking at the subject in a different way. The centre has a 3D cinema, interactive games which allow people to learn about different energy technologies, and an area which simulates the containment building of a nuclear reactor.

NucNet: Slovakia buys all of its nuclear fuel from Russia and *Mochovce-3* and *-4* are both of a Russian design. Have you had any problems due to the political problems that began in 2014?
Nicola Cotugno: *Russia's nuclear fuel company TVEL is the only supplier of nuclear fuel for the VVER-440 type reactor. We have four commercially operational reactors of this type in Slovakia. There are also reactors of this type in Finland, Hungary and the Czech Republic and TVEL is the only company that can supply these reactors with fuel. Nevertheless, we have started a diversification programme through which we will receive uranium and enrichment services from other companies, not just from Russia. TVEL will continue to manufacture the fuel assemblies, but we want to diversify the supply of uranium. This will take several years, because it requires not only technical expertise but we also have to go through a licencing process.*
Our business with TVEL has always been very smooth. Slovenské Elektrárne has never experienced any technical problems with the fuel, not even small leakages, which can occur in one out of every 1,000 fuel assemblies. The quality has been outstanding and even during this period of tension we have not experienced any delivery disruptions. When the situation was especially tense, we used airplane transports to avoid passing through Ukraine by train.

Background

Nicola Cotugno has been working for *Slovenské Elektrárne* for nine years and was appointed general-director in February 2015. He graduated in mechanical engineering from the *University of La Sapienza in Rome* and then majored in business at the Insead business school in France.

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