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Studsvik, Fennovoima to collaborate on CMS5 for VVER-1000/1200

Studsvik and Fennovoima Oy have established an agreement to support the final stages of the development of Studsvik's Core Management System 5 (CMS5) nuclear fuel analysis software for VVER-type pressurized water nuclear power plants.

The new version of CMS5 will be specific to the hexagonal-shaped nuclear fuel assemblies in VVER-1000 and VVER-1200 nuclear power plants designed by Rosatom in Russia. CMS5 already is widely-used by the operators of some 200 nuclear power plants that operate with the square-shaped fuel assemblies based on reactor designs that originated in the U.S.

"Studsvik's ability to offer CMS5-VVER opens the door to the entire suite of our technology," said Steven Freel, Studsvik Scandpower's president. "CMS5 enables operators to conduct all of their nuclear fuel analysis and planning independent of the companies that supply nuclear fuel. As a result, the operators can have higher confidence in the accuracy of their analysis, and achieve greater economies in their procurement of nuclear fuel."

The agreement was announced in Lausanne, Switzerland, at Studsvik's annual International Users Group Meeting, during which Fennovoima presented an overview of the project. The meeting brought together users of Studsvik's technology from around the world to share best practices and provide Studsvik with guidance on the future development of its software.

Fennovoima will support Studsvik in completing the CMS5-VVER verification and validation. Fennovoima plans to build a VVER-1200 nuclear power plant at Hanhikivi, Finland. The plant is scheduled to begin commercial operation in 2024.

"Adapting CMS5 for VVER type reactors will make the state-of-the-art in nuclear fuel analysis available to us for planning and operating our power plant effectively and economically" said Hanna Virlander, nuclear technology manager, of Fennovoima. "We are pleased that we can support the initiative to bring this technology to the VVER market."

Currently there are 22 VVER-1000 style nuclear power plants operating in five countries, outside of Russia. Plans are in place to build an additional seven VVER-1000 and seven VVER-1200 power plants.

Development of CMS5-VVER will allow operators to access extended applications of Studsvik's technology to manage the entire nuclear fuel lifecycle from fuel and reactor performance optimization, through the ultimate disposal of used nuclear fuel. The applications include GARDEL for reactor core monitoring, S3K for transient analysis,

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S3R for real-time operation of training simulators, SNF for the characterization of used nuclear fuel, MARLA for refueling optimization, used fuel management, planning and managing the storage of spent nuclear fuel in the used fuel pools and interim storage casks.

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About Studsvik Scandpower

Studsvik Scandpower AB, GmbH, and Inc., are part of Studsvik AB (STO: SVIK) with its headquarters in Stockholm, Sweden. Since before the first nuclear power plant began generating electricity more than 60 years ago, Studsvik has provided the tools, analysis and technology to optimize the performance of nuclear fuel and reactors, and manage the nuclear fuel cycle. Today, it supports more than 200 commercial nuclear power plants around the world. Studsvik Scandpower has offices in the United States, Germany, Sweden, China and Japan. Information is available at: www.studsvik.com/scandpower

About Fennovoima

Fennovoima was established to construct the Hanhikivi 1 nuclear power project to provide its owners with reasonable and stable-priced electricity. The Hanhikivi 1 project is a market-based private investment. Fennovoima is a non-profit co-operative; the owners will receive electricity at cost price in proportion to their ownership share. By reducing energy imports and improving Finland's energy self-sufficiency, Fennovoima also strengthens power generation within the European Union, as electricity for European consumers will be produced inside the EU according to EU standards. Electricity from Hanhikivi 1 will be carbon-free.