

## Titan-2 and Rolls-Royce have reached an agreement on the first phase design of safety I&C systems

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Rolls-Royce Civil Nuclear SAS has been confirmed as the designer of the most important parts of the safety I&C systems architecture for the Hanhikivi 1 nuclear power plant.

The agreement between Titan-2 and Rolls-Royce is important, because the documentation delivered can be utilised in moving towards the actual design phase of individual I&C systems. According to the agreement, Rolls-Royce will design the architecture and deliver its documentation to Fennovoima in 2016.

**Gregory Naginsky**, Titan-2's Chairman of the Board, is satisfied that a major corporation like Rolls-Royce, leader in its field internationally, has joined the Hanhikivi 1 project. Rolls-Royce is an experienced provider of safety I&C systems in the nuclear power plant sector; e.g. it is involved in the I&C system upgrade in the Loviisa power plant units to secure the planned service life of the two units currently in operation.

**Eric Blanc** – President Instrumentation & Controls – Nuclear – states: “The signing of this contract underlines the confidence that Titan-2 places in Rolls-Royce expertise, particularly in the design and licensing support for safety-critical I&C systems within a stringent regulatory environment like in Finland. We are proud to provide our engineering support for a new Rosatom VVER reactor construction in Europe.”

Fennovoima was involved in the negotiations as the owner of the project, ensuring that the Hanhikivi 1 power plant's safety I&C systems architecture design will be done by one of the best companies in the field.

### Background on I&C systems and their architecture

Architecture defines e.g. the interfaces between I&C systems and how individual systems have been separated sufficiently from each other. As for I&C systems, they are essential for nuclear safety: the I&C systems of a nuclear power plant monitor, control, and protect the operations of the reactor, systems and equipment. They work either automatically or activated by controllers when the use or safety of the plant require it.

Safety I&C systems' role is to detect abnormal operating states in the nuclear reactor and systems, and to form automatically the signals required to start and maintain the safety functions in each situation.

The Hanhikivi 1 plant will have several, separated I&C systems that secure the plant's safe operation and shutdown in different situations. The design and implementation of the architecture is under strict control, as the highest safety classification design and quality control methods applied to automation are used in it. The automation of the plant has to be completed, installed and fully functional before the commissioning of the plant.

### Interview requests

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