

Press release [date]

LUT involved in securing EU's nuclear energy self-sufficiency

Researchers from Lappeenranta University of Technology (LUT) are involved in a new project that will secure the EU's nuclear energy self-sufficiency by developing alternative fuel sources for Russian-manufactured nuclear reactors.

Nuclear safety experts from LUT participate in an international research project which develops safe nuclear fuel for Russian-manufactured VVER nuclear reactors in the EU. Currently, all nuclear reactors of Russian origin, located in the EU, use Russian nuclear fuel. Five EU member states, Finland, Bulgaria, Czech Republic, Hungary and Slovakia, operate in total 18 VVER nuclear reactors, which produce 52 per cent of the electricity in the countries.

The LUT researcher team, led by Professor **Juhani Hyvärinen**, will produce a report on requirements related to criticality safety for all of the five countries. Criticality safety is an area of nuclear safety for ensuring that fuel will not “burn” by itself. The aim is to ensure that the developed fuel fulfils both national safety authorities' criteria as well as international requirements. When these criteria are met, the fuel can be used in all of the countries where VVER reactors are in use.

'There is strong, internationally appreciated competence on nuclear and criticality safety in LUT. The involvement of LUT is an indication of the nuclear power community's recognition of our competence', Hyvärinen explains.

The study increases EU's energy self-sufficiency and independence by diversifying nuclear fuel sources. The research project ensures the availability of nuclear fuel in EU regardless of the state of world politics.

'The research project has a major significance to the EU's ability for efficient and sustainable environmental policy-making. It will also alleviate decreasing greenhouse gas emissions.'

The research is led by Westinghouse Electric in Sweden. Westinghouse is one of the world's largest suppliers of nuclear power plants and nuclear fuel. The project has received funding of 2 million euros from the EU's Horizon2020 programme and will last for two years. In addition to LUT, seven other partners are involved in the project.

More information:

Juhani Hyvärinen, Professor, LUT School of Energy Systems, juhani.hyvarinen@lut.fi, +358 50 524 1512.