Simulate a Small Modular Reactor project in Hungary

Call for Applications

The Budapest University of Technology and Economics (BME) in cooperation with HUN-REN Energy Research Centre announces a student project competition on the topic of small modular reactors (SMRs).

Who can apply?

ⓘ Students pursuing **BSc or MSc studies at BME can apply** for the SMR student competition in **teams of 3-5 participants**. Team members must come **from at least two different faculties** at BME (to emphasize the importance of having specialists from different fields in nuclear projects and to encourage teamwork).

The prize

ⓘ The winning team will be rewarded with a **professional trip to the United Kingdom** for all members to visit one of key facilities of Rolls-Royce SMR. The winning students will be accompanied by senior experts from BME and HUN-REN.

The topic

The participating teams have to elaborate three different topics, providing insight into the various tasks and fields involved in a nuclear project. Your tasks are: (1) to develop a fictional project company, (2) to compare the British and the Hungarian licensing system and (3) to demonstrate the safety of a small modular reactor.

The topics in details are:

❶	Develop a proposal for a company to implement a Central European SMR project. Give the company a name, a logo and image, and formulate its mission and key messages to appeal to political decision-makers and the general public. Make a proposal for the structure of the future nuclear licensee company, which will initially be responsible for the implementation of the SMR construction project and, later, after commissioning, for the operation of the SMR power plant. Assess what products the SMR power plant will sell to which markets. Assess the market potential of the SMR power plant. Include the evaluation of the public acceptance of an SMR construction in Hungary, and define a communication strategy for the company.
❷	Evaluate the licensing system for SMR power plants in the United Kingdom. Evaluate the licensing steps required to obtain a license for the siting, construction, and operation of an SMR power plant in the United Kingdom. Discuss how British licensing practices could be applied in Hungary. Assess the differences between the current Hungarian and UK nuclear licensing systems. Make recommendations on how the Hungarian system could be enhanced to enable SMR power plants to be built and operated at multiple sites in Hungary with a fixed-term licensing period. How can international best practices related to SMRs be applied to the Hungarian licensing process?

❸ Review publicly available documentation on the Rolls-Royce SMR. Prepare a summary document and a presentation on the main technological and safety features of the Rolls-Royce SMR. Review the public chapters of the Preliminary Safety Analysis Report and, based on this, demonstrate how the facility can meet the requirements for a state-of-the-art Generation 3/3+ pressurized water reactor.

Deliverables

Submissions must be in the form of a 30-50 page English language document (in DOCX and PDF format) similar to a diploma thesis, as well as a maximum 30-page English-language presentation (in PPT and PDF format). The teams of 3-5 students must attend an oral interview and present their results in a 30-minute presentation.

Evaluation

The submissions and related student presentations will be reviewed and evaluated by experts from BME and HUN-REN EK together with experts from the Hungarian nuclear industry and Rolls-Royce SMR. The jury will assess the entries based on these documents and the oral interview. The reports and presentations will be evaluated relative to each other, regardless of the composition of the team and the number of team members.

Application

ⓘ **Applications must be submitted via email** to the following address: SMR_competition@reak.bme.hu

The **application must include**:

- The name of the project team;
- Professional composition of the team (participants' name, field and year of study);
- A short project plan (a maximum one-page plan outlining the approach to the project, including the tasks of the participants).

Application deadline: 15 December 2025

Key deadlines and dates to save

• Application deadline	15 December 2025
• Submission of student reports	15 February 2026
• Project presentations (oral interview)	3rd week of February 2026
• Final decision	23 February 2026
• Travel to the UK for the winners	March 2026

In case of any question, please contact: SMR_competition@reak.bme.hu

On behalf of the Organizing Committee:

Prof. Attila Aszódi,
Dean of Faculty of Natural Sciences, BME