



Contribution ID: 16

Type: **Oral**

Designing small modular reactors for a circular economy

As part of striving for sustainable development, awareness is growing that the world needs to shift from a linear to a circular economy. A circular economy is enabled through design and goes beyond the waste hierarchy, as it aims to eliminate waste altogether. Things are also designed to last longer and be easier to repair, reuse, repurpose and recycle.

Given the ambitions to contribute to sustainability, the nuclear industry now has a window of opportunity to ensure that the many small modular reactors that are anticipated to be constructed over the coming decades are designed for a circular economy. That is, to align with sustainability principles, small modular reactors need to be designed not only for decommissioning but also for circularity.

By taking a lifecycle approach, the paper will present a set of design principles for small modular reactors in a circular economy. Opportunities and challenges with designing reactors for circularity will also be discussed.

Country OR International Organization

Sweden

Email address

kristina.gillin@gmail.com

Confirm that the work is original and has not been published anywhere else

YES

Author: GILLIN, Kristina (Vysus Group)

Presenter: GILLIN, Kristina (Vysus Group)

Track Classification: Topical Group A: SMR Design, Technology and Fuel Cycle: Track 2: Advanced fuels, reprocessing, waste management and decommissioning aspects for SMRs –Safety, Design and Technology