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## Use of Clean Energy from Small Modular Reactors (SMR) for Industrial Applications and Socio-economic Development

There is a growing interest in the use of Small Modular Reactors (SMRs) for supply the electricity to the rare areas or through the use of process heat from the reactor for industrial processes, which can significantly help to reduce toxic emissions in the environment and contribute to Net Zero by 2050. Heat is used in industry in a variety of applications which can be grouped into several categories.

In this paper the current and future industrial applications of SMRs will be presented. As a case study, a proposed example of using the process heat source from a typical SMR, namely, the system-integrated modular advanced reactor (SMART) design, to be used for water desalination using IAEA DEEP software. The water capacity will be analyzed to achieve long term sustainability. This new heat source will save the consumption of electricity from conventional fossil sources and reduce the cost of the industrial products and consequently share in the socio-economic development in the isolated regions and far from the main electric grid.

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

Yes

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