



Heat Storage for Gen IV Reactors for Variable Electricity from Base-Load Reactors

Changing Markets, Technology, Nuclear-Renewable Integration and Synergisms with Solar Thermal Power Systems

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Dr. Piyush Sabharwall

Dr. Piyush Sabharwall is a Nuclear Staff Research Scientist working in the Nuclear System Design and Analysis Division at Idaho National Laboratory (INL). He has more than 12 years of research and development experience in nuclear/thermal engineering and has been involved in several academic, industrial, and cross-discipline national laboratory research projects. He has served as the INL lead for numerous partnerships. Dr. Sabharwall has expertise in heat transfer, fluid mechanics, thermal design, thermodynamics, energy systems, and nuclear safety analyses. He joined the INL in 2008. His INL research areas include compact heat exchangers, heat transfer enhancement, molten salts, tritium mitigation, thermal hydraulics, energy storage, balance of plant, advanced reactors, small modular reactors, energy conversion, hybrid energy systems, versatile fast test reactor (VTR), and other energy-related research topics. Dr. Sabharwall currently serves as the VTR experimental lead for gas cooled loops and co-principal investigator on the development of two experimental research facilities at INL. The first is a high-temperature thermal energy distribution system (TEDS) for delivery of thermal energy for various nonelectric hybrid energy applications. The second is a high-temperature multi-fluid, multi-loop experimental facility for the INL to support thermal hydraulic, materials, and thermal energy management research for nuclear and nuclear-hybrid applications. Dr. Sabharwall co-led the development molten salt preparation and purification facility for research on nuclear-relevant fluoride and chloride salt systems. Dr. Sabharwall obtained his Bachelor of Science in Mechanical Engineering, with concentration in Robotics and Controls, from Wilkes University in Pennsylvania; a Master of Science in Nuclear Engineering with a minor in Mechanical Engineering from Oregon State University; a Masters in Renewable Energy and Sustainability Systems from Penn State University; a Master of Engineering in Engineering Management and Ph.D. in Nuclear Engineering from University of Idaho.

