



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*

July 23-24, 2019
Idaho State University
Bennion Student Union Building, 1784 Science Center Drive, Idaho Falls Idaho

Bruce Kelly, P.E., Senior process engineer at Solar Dynamics with experience in the design, engineering, and economic assessment of advanced renewable energy conversion systems and conventional power plants. He has been responsible for the conceptual, preliminary, and final design and economic analysis of advanced solar thermal energy systems, emissions systems for fossil-fired distributed generators, and hydrogen delivery infrastructures.

Patents and Publications

- Co-holder of patents on an air-cooled receiver concept and a liquid metal heat pipe receiver concept.
- Bruce Kelly and D. Kearney, Parabolic Trough Solar System Piping Model (NREL, July 2006).
- Bruce Kelly, "Two tank indirect thermal storage systems" (Palo Alto, CA (USA), April 10, 2008).
- Bruce Kelly, "Nitrate and Nitrite/Nitrate Salt Heat Transport Fluids" (presented at the World Solar Power 2007, Sevilla, Spain, 2007).
- Bruce Kelly, Thermal Storage Oil-to-Salt Heat Exchanger Design and Safety Analysis, NREL, March 22, 2001.
- Bruce Kelly, Nitrate Salt Heat Transport Fluid - Rankine Cycle, Steam Generator, and Thermal Storage Analyses, NREL, 2001.
- Bruce Kelly, Lessons Learned, Project History, and Operating Experience of the Solar Two Project, Sandia Report SAND2000-2598, November 2000
- Bruce Kelly (Bechtel Corporation), Investigation of Thermal Storage and Steam Generator Issues, Sandia Report SAND 93-7084, August 1993



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- Bruce Kelly, Development of Baseload CSP Advanced Nitrate Salt Central Receiver Power Plant: Design
 - Basis Document, Contract DE-EE0003596, February 2011