

Kevan Weaver

Director, Technology Integration, TerraPower, LLC



## ***"TerraPower and the Role of Nuclear Energy"***

October 9, 2014 at 5:30 p.m.

At [Dominion Innsbrook Technical Center](#), Glenn Allen, VA

By 2030, the world's population is expected to increase by 1.4 billion to 8.3 billion, and to more than 10 billion by 2050. Electricity demand is expected to increase by 63 percent by 2030 to support this growth, and increase 93 percent by 2040. Increased energy use can raise standards of living and improve prosperity, but if the energy sources used to supply this demand remain emission intensive, the impacts on the environment could be severe. In 2006, Bill Gates and a group of like-minded visionaries decided that the private sector needed to take action. An expert group of scientists and engineers came together to analyze all energy generation technology options from a total-system perspective. The group concluded that the best option for addressing the world's energy challenges is to expand the use of nuclear power, in a much improved way, on a global basis. As a result, a nuclear project team was assembled to evaluate and begin design of an advanced nuclear power plant. The nuclear project team was eventually spun off in 2008 into a privately funded startup company called TerraPower.

Dr. Kevan Weaver, director of technology integration at TerraPower, will discuss the history of TerraPower, it's current focus, and what to expect in the future.

### **Speaker Biography:**

Dr. Weaver is the director of technology integration for TerraPower, where he is responsible for identifying, developing and maintaining U.S. and international joint programs and relationships that support TerraPower technology development. Before joining TerraPower, Dr. Weaver worked at the Idaho National Laboratory (INL) for more than nine years in various capacities, all related to the development and use of advanced nuclear reactor concepts. He served as a national technical director for the Nuclear Hydrogen Initiative, and as a technical lead for Fission Surface Power Systems for a NASA/DOE program. He also served as the U.S. system integration manager for the Very High Temperature Reactor and Gas-Cooled Fast Reactor programs. He was also the co-chair on the international Gas-Cooled Fast Reactor system steering committee for the Generation IV International Forum (GIF). Early in his tenure at INL, he was group leader for the Advanced Reactor Design Group.

With much of his career in advanced reactor design and analysis, Dr. Weaver collaborated with fellow researchers on Generation IV nuclear energy systems, the Generation IV International Forum, and the Advanced Fuel Cycle Initiative. His experience has allowed him to focus on some of the critical technical challenges facing advanced reactor concepts, such as the development and testing of advanced nuclear fuels and materials. His technical background includes reactor physics, reactor design, fuel cycle analysis, radiation spectroscopy, radioisotope production, and reactor operations. In addition, Dr. Weaver is the author/co-author of more than 90 publications and technical reports in nuclear science and engineering, and is a co-author of a new textbook on fast spectrum reactors. Dr. Weaver received his BS degree in physics from Brigham Young University, and Ph.D. degree in nuclear engineering from the University of Utah.

### **Schedule:**

- Social Hour - 5:30 p.m.
- Dinner - 6:00 p.m.
- Presentation - 6:45 p.m.
- Adjourn - 8:00 p.m.
- Directions to the [Dominion Innsbrook Technical Center](#)

**COST:** \$20 (\$10 for students) includes dinner.

Reservations have closed on Monday October 6, 2014. Please address any questions to [Erich Fritz](#).