## **NEWS** from The Savannah River Site



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For Immediate Release

## It's All About Water as Middle School Students Focus on Conservation, Reuse and Self-Sufficient Systems in the 2009 Future City Competition

Aiken, S.C., (Sept. 24) — Nobody can doubt the importance of water and water resources in our world, whether it is clean drinking water or water as a resource for sanitation, irrigation or fire protection. But as our cities grow and expand, what can be done to conserve and reuse such a valuable resource? Beginning this fall, thousands of middle school students will tackle that specific question in the 2009 National Engineers Week Future City Competition<sup>TM</sup>.

Sponsored by the nation's professional engineering community, Future City aims to stir interest in science, technology, math and engineering among young people. Students work in teams under the guidance of a teacher and a volunteer engineer mentor to design and build a city of tomorrow. They must also conduct research for an essay on a pressing social need. This year, the essay centers on ways to improve water use by creating a home system that minimizes the use of municipal or externally supplied water for its daily requirements.

Future City Competitions will be held in January 2009 in 40 regions across the country. First-place winners from each qualifying regional competition receive an all-expense-paid trip to the 17th annual Future City National Finals in Washington, D.C., Feb. 16-18, 2009, during National Engineers Week. The national grand prize is a trip to U.S. Space Camp in Huntsville, Alabama. More than 30,000 students from 1,100 middle schools are expected to participate nationwide.

In Future City, the nation's largest engineering education program and among the most popular, students create cities on computers using the SimCity 4 Deluxe software and then build three-dimensional, tabletop models to scale. To ensure a level playing field, models must use recycled materials and can cost no more than \$100 to build. Students also write brief abstracts describing their city and must present and defend their designs at the competition before a panel of engineer judges who test the depth of the teams' knowledge.

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That knowledge is often extensive, as shown by the essays which require 7th- and 8th-graders to explore complex challenges and ideas that most adults would consider over their heads. This year's topic, "Creating a Self Sufficient System within the Home Which Conserves, Recycles and Reuses Existing Water Sources," should prove particularly fruitful in producing the possible new solutions for the future. Engineers and researchers understand that developing a home that is self-sustaining and self-sufficient in its water use will be necessary in the future. The essays must describe a home outfitted with existing technologies for improving water use in the home, as well as incorporate new technologies, of the students' invention, that will either provide a new source of renewable water supply, recycle water within the home, purify the water, or lower the overall water usage of the home. In addition, the system should also seek potential ways to contribute water back to the municipality or water source.

Solving a problem with such global implications as water conservation is certainly no easy task, as many of the engineers, scientists and researchers currently working on such issues can confirm. So then why place that same task into the hands of middle school students?

"Every year we present these kids with really tough, really pressing engineering issues and they continually astound us with their knowledge, ideas, and solutions for the future," says Bill Knight, Future City National Program Manager. "I think we sometimes feel more like the students by the time we see what all these kids can do!"

Savannah River Nuclear Solutions, LLC, President and CEO Chuck Munns notes that direct, hands-on experience proves to be among the most successful routes to acquaint young people with engineering. "Through this experience, those in middle schools realize the impact engineering has on their lives, and how math and science are highly relevant to their world. This is the ideal age to reach out and to influence as these students begin to consider what types of careers to eventually pursue," said Munns.

The school deadline for the 2009 Future City Competition is Oct. 31. For more information on entering or volunteering in the Future City Competition, visit www.futurecity.org, or call Bonnie Maxwell, Savannah River Nuclear Solutions Educational Outreach Program, (803) 952-8720. Any and all interested schools, teachers, students or engineers are encouraged to participate.

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## **About Engineers Week**

The National Engineers Week Foundation, a formal coalition of more than 100 professional societies, major corporations and government agencies, is dedicated to ensuring a diverse and well-educated future engineering workforce by increasing understanding of and interest in engineering and technology careers among young students and by promoting pre-college literacy in math and science. Engineers Week also raises public understanding and appreciation of engineers' contributions to society. Founded in 1951, it is among the oldest of America's professional outreach efforts. Co-chairs for 2009 are Intel Corporation and the National Society of Professional Engineers. For more information, visit <a href="https://www.eweek.org">www.eweek.org</a>.