

# FACES



of the Recovery Act

To reflect on Women's History Month, the Department of Energy would like to highlight some of the extraordinary women making history today with their work through the American Recovery and Reinvestment Act.



## Dr. Olgica Bakajin

**HAYWARD, CA** - Dr. Olgica Bakajin heads the Advanced Research Projects Agency – Energy (ARPA-E) awarded Porifera Inc. project team with a distinguished technical background and strong leadership qualities.

Bakajin received her Ph.D. in Physics from Princeton University, and served as an E.O. Lawrence Fellow at Lawrence Livermore National Laboratory for three years. Bakajin has authored over 30 peer reviewed publications (>2000 citations), including journals such as “Science,” “Nature,” and “Proceedings of the National Academy of Sciences”, including several pioneering publications on carbon nanotube membranes. She also holds five US Patents and several pending patents. She received the NaNo 50 Award in 2007 in the innovator category. Previously, Bakajin also served as the principal investigator on several large-scale DARPA-sponsored projects (including MGA and MANTRA programs) and DTRA-sponsored projects.

With ARPA-E's financial support, Porifera, Inc. aims to develop high flux, high selectivity carbon nanotube (CNT) membranes to efficiently separate carbon dioxide from industrial smokestack emissions. Presently, companies rely on chemical absorption to separate carbon dioxide from other emissions. However, chemical absorption is expensive and energy-intensive, and has an independent, negative impact on the environment. The goal of this project is to replace current chemical-based carbon dioxide separation technology with membrane-based technology. If this project is successful, it will result in carbon-dioxide separation membranes that deliver higher efficiency, cheaper sequestration, and lower energy consumption.

## Powering Up for Recovery in Michigan

**HOLLAND, MI** – Elizabeth Rolinski can't wait to reopen the factory she was once forced to shutter. When the Department of Energy awarded Johnson Controls Inc. a \$300 million grant to manufacture high-performance batteries for electric cars, it solidified the company's decision to reinvest in American workers in this all-American town.

[See the full video story.](#)

## Tracy's New Weatherization Training

**SHAKER HEIGHTS, OH** – Tracy Workley thought she had a pretty secure job when she worked as a city inspector for Shaker Heights, a city in the suburbs east of Cleveland, but in October 2008, she was laid off as the economy slumped and the city cut back. However, her fortunes quickly turned around.

[Read her full story on Energy Empowers.](#)



## Rena Ellis



**AUGUSTA, GA** - Despite experiencing the personal impacts of a distressed economy but buoyed by her faith and persistence, new Savannah River Site ARRA employee Rena Ellis is happy to “seize the day” and a new opportunity as a structural designer at SRS. Bad news and economic hardship struck twice for Ellis as the result of the nation’s stumbling economy. First, as the nation’s interest in the construction of ethanol plants waned in face of the economic downturn, Rena was laid off as a piping designer for a company in Memphis, TN which built ethanol processing plants.

Next, when the troubled economy forced discontinuation of a major engineering project in Baton Rouge, LA, Ellis once again found herself in the unemployment line.

Believing faith and persistence would help her prevail, Rena turned to supporting others by visiting nursing homes and supporting senior citizens in the area. As implementation of the American Recovery and Reinvestment Act (ARRA) got underway, Rena’s friends at SRS, where she had previously, worked let her know of ARRA job opportunities at the site as a structural designer. Ellis contacted a staffing agency and today she’s a proud member of the SRS ARRA team.

“I believed the best would be” said Ellis who says she’s glad to be part of team that will provide engineering designs to accelerate SRS cleanup efforts and reduce risks for her fellow employees, the public and the environment.

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## ENERGY EMPOWERS



## Supporting Young Scientists and New Research



**BOULDER, CO** - Alysia Marino is still not over the surprise of her recent award. You could hear a smile in her voice, “It’s a very valuable thing to a young physicist trying to establish a research program.”

Marino always knew she’d be a scientist of some kind. Still, it’s something of a happy accident she ended up in physics. “I think I was too klutzy for chemistry and too squeamish to really cut things open,” she said. Physics required neither a steady hand nor a strong stomach, and so far the choice has proved a fruitful one for the University of Colorado assistant professor. Marino was recently awarded a five-year, \$750,000 Early Career Research grant from the Department of Energy, under the American Recovery and Reinvestment Act.

Marino will focus on long-baseline neutrino research—first, for Japan’s T2K experiment, then for Fermilab’s Long Baseline Neutrino Experiment. For the LBNE, Marino will concentrate on neutrinos and how to better measure their fraternal twins—muons—when they’re fresh out of the beam source and beginning their journey.



## Recovery Act Provides New Opportunity for Educator

**WILL COUNTY, IL** - For Illinois educator Wyn Hyzer, the Recovery Act provided a new career opportunity at exactly the right time. In December 2008, Hyzer lost her job as the recycling education coordinator for the City of Joliet because of budget constraints and was unable to find another education job. Hyzer's unique skills and experience were recognized by Will County, which was able to hire her in November 2009 as a full-time environmental educator, using the county's Energy Efficiency and Conservation Block Grant (EECBG). In her new role, Hyzer educates students and residents on how best to reduce household energy costs and waste through recycling and conservation practices.

Hyzer will provide information to over 10,000 students and teachers a year, in addition to public outreach activities at community events and celebrations. She brings both experience and expertise to the job. In 2006, she was named Outstanding Recycling Educator of the Year by the Illinois Recycling Association. She was credited with expanding school recycling programs by 600 percent while with Joliet. This included increasing school presentations to 220 events annually.

The county's EECBG-funded projects also include a landfill gas power generating plant. The county intends to use a portion of the future revenue generated by the facility to continue to fund the environmental education coordinator position.



## Small Business Means Big Business at Y-12



The disposal of nearly 90,000 cubic meters of waste from projects funded by the Recovery and Reinvestment Act involves careful and strategic planning. That's where companies like Jill Mortimore's (Chief Manager) Elvado Environmental come in. Elvado is one company that's helping Y-12 prepare for the future by handling waste from site cleanup projects. Through January, nearly 5,700 cubic meters of waste has been disposed of from the Y-12 ARRA projects.

Based in Knoxville, Elvado is an 8 (a)-certified small business that provides consulting and project management services for environmental compliances and cleanup projects. This woman-owned company is handling the waste management planning and implementation for five of the seven ARRA-funded cleanup projects at Y-12.

The Elvado staff, which grew by six new employees in just seven months, jumped at the opportunity to handle this work. Not only has this contract resulted in a larger staff, Mortimore said the contract will continue to positively impact the company's business by "increasing capability to bid on future work due to expanded staff and experience." On the Y-12 ARRA projects, nearly 84 percent of the \$50 million in contracts has been awarded to small businesses.



### Faces of the Recovery Act

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The "Faces of the Recovery Act" newsletter is a monthly publication issued by the Office of the Secretary at the Department of Energy, highlighting people and projects impacted by the Recovery Act.

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