



COMMUNITY REUSE ORGANIZATION

two states, one future

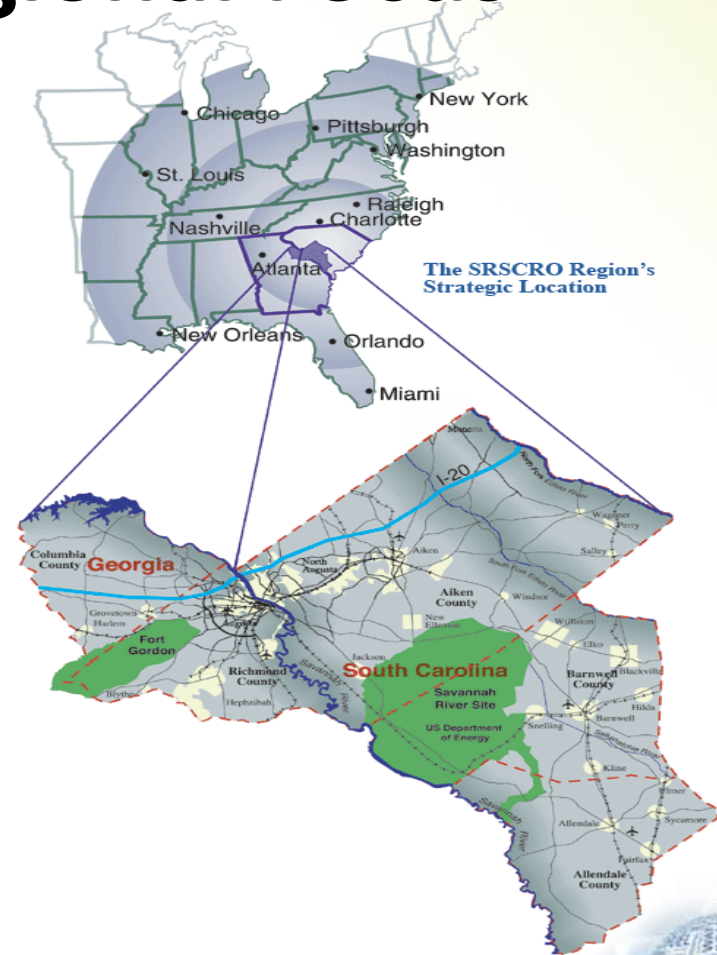
Regional Approach for Skilled Nuclear Workforce of the Future



SRS Community Reuse Organization

SRSCRO - A Regional Focus

- Board = 22 members (11 from each state)
- Five Counties, Two States
- Focus: Regional Economic Diversification
- Designated by Department of Energy as the CRO for SRS (8 CROs in the country)
- Private, Non-Profit – 501c3
- Multiple Initiatives – one is the Nuclear Workforce Initiative



Regional Workforce Outlook

Nuclear · Cyber · Healthcare · Manufacturing



- **37,000** job openings with existing regional companies in next 5 years
- **80%** openings are replacement jobs
- **49,000 (40%)** regional workers commute daily across county lines
- **400,000** workers in the 9-county laborshed region

<http://www.srscro.org/community-issues/>



Unique Nuclear Region



SCANA (VC Summer):

- 1 Operating Unit
- 2 AP 1000 Units (2012-2019)

Southern Co. (Vogtle):

- 2 Operating Units
- 2 AP 1000 Units (2012-2019)

SRS:

- Shaw/Areva MOX
- Savannah River Nuclear Solutions
- Savannah River Remediation
- Parsons
- Department of Energy
- NNSA



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Changing Our Past Through Collaboration
AN INTERAGENCY PARTNERSHIP



DOE Complex Workforce Perspectives

- **Regionally – SRS Aging Workforce**

Within 3 years, up to 50% of SRS workers are retirement eligible

- **Nationally – Aging Nuclear Workforce**

Within 4 years, LANL expects to hire 2000+ due to retirement wave



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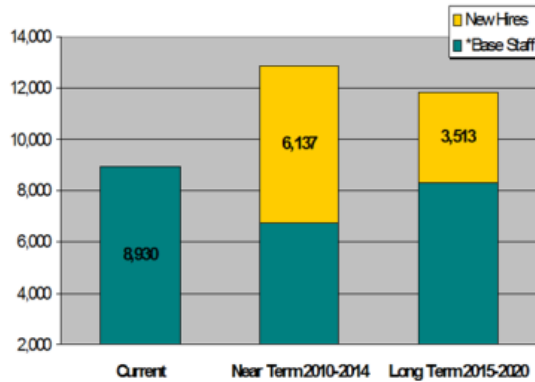
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Regional Response



Regional Response to Long-Term Nuclear Skill Needs



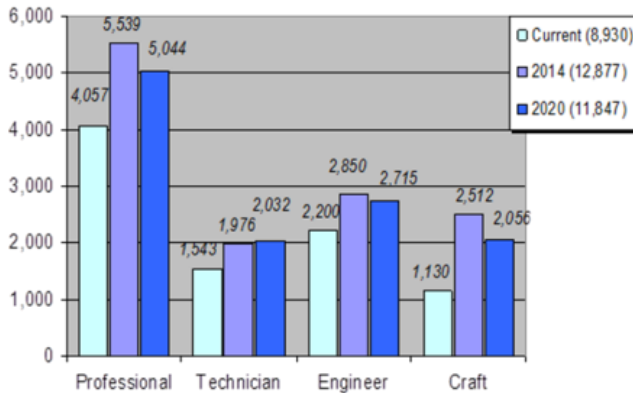
* Base staff is existing staff for the period less losses due to retirements and attrition

2009 SRSCRO Study *

- 10,000 new nuclear workers needed over 10 years
- 8 regional nuclear employers participated
- Surveyed 57 key industry job needs (Not All Jobs)
- Professional, Engineer, Technician, Craft categories

2016 Long-Term Workforce View

- Nuclear industry workforce demand continues
- Strong competition between nuclear employers
- Competition for STEM skills with other industry sectors
- Challenge to attract and retain Millennial workforce
- Evidence that employee retention is greater for local, skilled workforce



*Source: Booz Allen Hamilton Workforce Study • Commissioned by: the SRS Community Reuse Organization



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AN ENERGY WORKFORCE INITIATIVE



Our Regional Leadership Philosophy

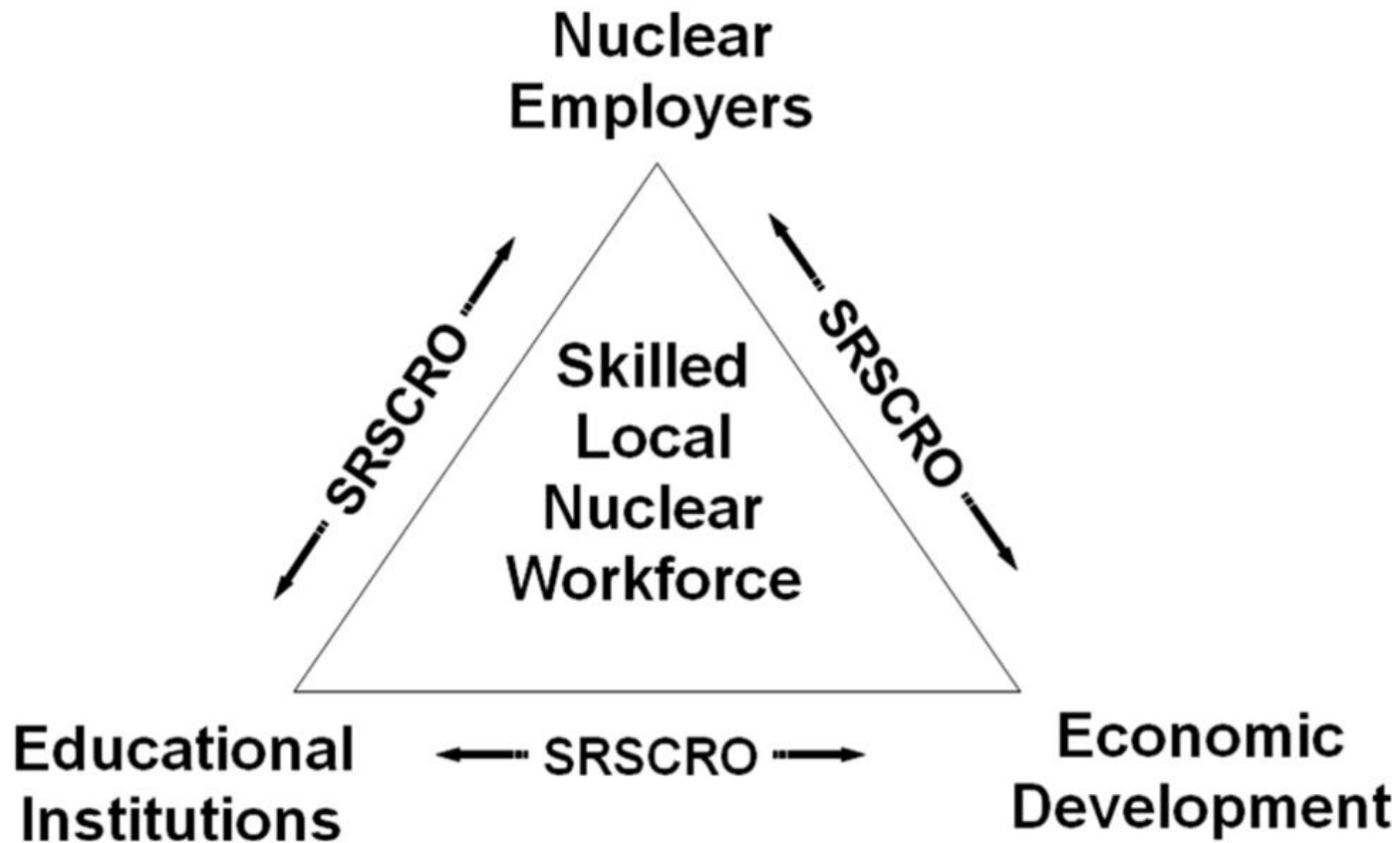
We have an obligation to ensure that people of our region develop the skills needed for jobs in our region.



Growing Our Own Through Collaboration®



Nuclear Workforce Initiative (NWI®)



Education Partners Supporting Local DOE Workforce Needs

- Aiken Technical College (SC)
- Augusta Technical College (GA)
- Augusta University (GA)
- University of South Carolina Aiken (SC)
- University of South Carolina Salkehatchie (SC)



Collaboration for Advancing Nuclear Skills Regionally \$4.8 M DOE Grant – Five Years

Aiken Technical College	Nuclear Quality System (NQS) Associate Degree Advanced Nuclear Welding
Augusta Technical College	Chemical Technology Associate Degree Nuclear Career Advisement Program
Augusta University	Nuclear Science Tracks in Chemistry and Physics Degree Programs
University of SC Aiken	Environmental Remediation and Restoration Specialized Biology Degree
University of SC Salkehatchie	Expansion of STEM Coursework for Region
SRSCRO	Promotion of Regional Nuclear Science Programs, Grant Management





ANSR Program Metrics

- Cumulative College Student Enrollment – 821
- Student Enrollment Current Year – 217
- ANSR Graduates (as of 2/2016) – 159
- ANSR Job Placement (as of 2/2016) – 143 (90%)
- STEM Program Impact - 3854



Nuclear Science Program

Augusta University

Joseph R. Newton, PhD
Assistant Professor of Nuclear Science
Department of Chemistry and Physics
Augusta University

Augusta University Fast Facts

- Augusta University is a public research university and academic medical center composed of nine colleges
- Location: Augusta, Georgia (Richmond County), about 70 miles southwest of Columbia, South Carolina.
- Size: 650 acres of campus, approximately 150 buildings in six counties across Georgia.
- Governance: Board of Regents, University System of Georgia
- Student Enrollment (Fall 2015): 8,333
- Total Faculty: 1,661
- Living Alumni: 54,000

Nuclear Science Concentration for BS Chemistry and BS Physics Degree Programs

Through ANSR grant, newly established program includes:

- Introduction to Nuclear Science
- Introduction to Nuclear Measurements (Laboratory Course)
- Applications of Nuclear Science

Program leads to a BS Chemistry or BS Physics Degrees with a Nuclear Science Concentration that applies to SRS, graduate studies, nuclear power industry, nuclear medicine.

Program Development & Success

- Enrollment Began Fall 2012
 - 82 Students Enrolled in First Course (2012 – present)
 - 13 Students Graduated with Nuclear Concentration
- New Relationships Developing with SRS and Plant Vogtle
- SRNL Internships
- Post Graduate Status Includes
 - Employment at SRS & Plant Vogtle
 - Pursuit of Advanced Degrees and Research Opportunities

Chemistry & Physics Nuclear Science Internship: Students Publish Paper with SRNL Scientists

- 🔬 AU nuclear science students participate in SRNL internships
- 🔬 10 students over 3 summers
- 🔬 4 of these are coauthors on a paper in Operational Radiation Safety



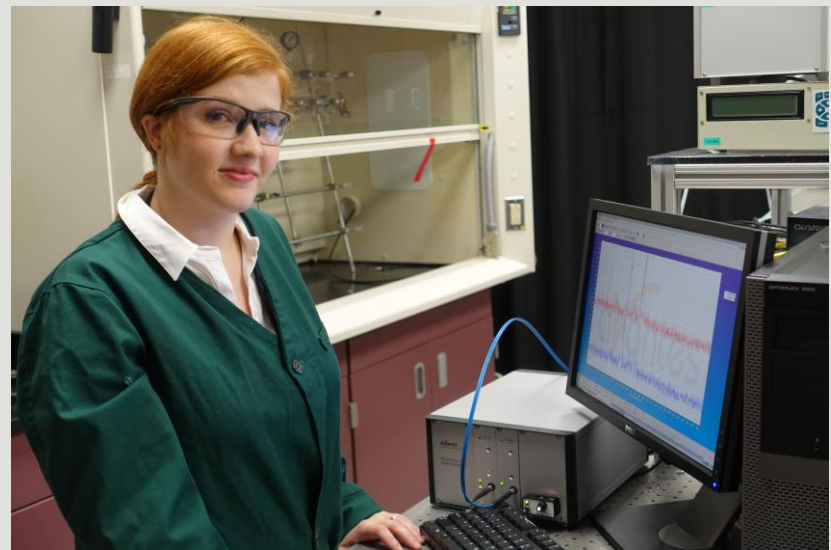
AU Students : Kelsey Moore, Chris Sailors, Rick Stahman, Levi Johnson.
SRNL Scientists : Tim Jannik, Ken Dixon, Daniel Stone. AU Faculty: Joseph Newton

Chemistry & Physics Nuclear Science Graduate: Liz Johnson - Class of 2015

Completed Co-op at SRNL

- Leveraged internship into a co-op
- Heavily recruited by SRNL for a full time position
- Nuclear Science Scholar

“I owe many of my opportunities to the Nuclear Scholars Program... **Because of my hands on nuclear experience from the Nuclear lab class, I am an excellent candidate for many positions!**... Also through the program I was able to get an Internship with Savannah River National Laboratory and experience nuclear safety in the workplace.”



Chemistry & Physics Nuclear Science Graduate: Levi Johnson - Class of 2015

Medical Physics Graduate Student at
Vanderbilt University

- Outstanding Nuclear Science Student in 2015
- Completed a Nuclear Science Internship at SRNL
- Nuclear Science Scholar

“The nuclear science scholarship has allowed me to focus even more on my academics... The scholarship has allowed me to devote more time class work, lab, and research endeavors... **The internship was a fantastic experience and a great resume builder.**”

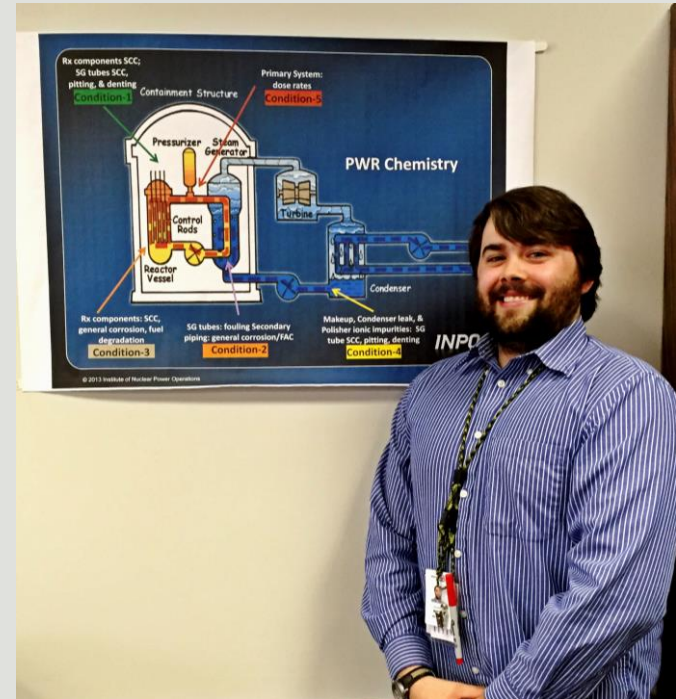


Chemistry & Physics Nuclear Science Graduate: Zack Minter - Class of 2014

Plant Vogtle 3&4: Chemistry Technician

- Nuclear Science Scholar
- 2014 Outstanding Student in Nuclear Science

“I became infatuated with nuclear near the end of the road... **I enjoy the job dearly and couldn't have asked for a better position...** I am extremely blessed to be in my position and this all would not have been possible without the help of GRU developing the nuclear program”



New Needs

- **Recruitment** - into proven local nuclear-related programs to expand the pool of local nuclear skilled workers
- **Training** - for high-demand nuclear skills needed by DOE
- **Retention** – of new employees, both by the employer and the community



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Future Collaboration

Workforce Opportunities in Regional Careers (WORC)

- **Scholarships** for academic programs that support high-demand DOE needs
- **Innovative marketing/outreach** to attract students to training/education programs
- **Work-based learning** to provide an early link between students and local careers



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