

Energy Industry POWERS CTE Program

By Amy Khokhar

Michael Fields is a recent graduate of Buckeye Union High School in Buckeye, Arizona. Fields is enrolled in the Estrella Mountain Community College (EMCC) Get Into Energy program, which means he is well on his way to a promising career. Specializing in power plant technology, in two years he will earn a certificate that will all but guarantee a job in the energy industry, where skilled workers are in extremely high demand.

Fields has taken several of the program's required courses, including career and personal development, energy industry fundamentals and algebra. The first

course introduced him to the basic skills necessary for success in any job, including resumé preparation, interview skills, conflict resolution and professional work habits. The course also gave Fields the opportunity to evaluate his core career interests, skills and values to ensure their alignment with a career in energy.

"Through the Get Into Energy program, I've learned a lot about myself," explains Fields. "I've discovered my goal, and I won't allow anything to keep me from that."

In 2000, EMCC began a partnership with Arizona's major energy employers to develop a program to provide students in the 11th grade and up with a seamless pathway into skilled, well-paying energy careers. EMCC, twice named among the nation's top-ranked community colleges by the Aspen Institute, is proud of its progressive energy program, and rightly so; many say it is on its way to becoming a national model.

"As the energy industry's objectives have become more defined, [EMCC] has been at the table developing curricula to meet their changing needs for both secondary and postsecondary students—their future workforce," says EMCC's Vice President of Occupational Education Clay Goodman.

Energy Career Readiness

In 2008, the Arizona State Board of Education approved Education & Career Action Plans (ECAPs) as a requirement for students in grades 9 through 12. An ECAP reflects a student's plan of coursework, career aspirations and extended learning opportunities in order to develop individual academic and career goals. The mandate prompted

CHART 1:

EMCC Feeder High School Kuder® Career Interests
Top Five Assessment Rankings



CHART 2:

EMCC Energy Students Kuder® Career Interests
Top Four Assessment Rankings



EMCC to look for ways to assist high school students in narrowing down potential future careers and coming up with a strategy for planning its career and technical education (CTE) curriculum around students' ECAPs.

Goodman says EMCC found a solution in an online education and career planning system by Kuder, Inc. that includes a four-year education plan built specifically for the ECAP. EMCC provides its local feeder schools with free access to this system, which helps students identify programs of study that match their

career interests through a series of career assessments, and build their ECAPs accordingly (Chart 1). The system includes a database that gives administrators the ability to view aggregate data on students' tentative career interests (Chart 2).

The system, called *Kuder® Navigator*, helps middle school and high school students explore job and training options. "It gives EMCC insights that help us plan our CTE programs. It also lets us keep a close eye on the numbers of students whose assessment results point to energy-related careers," explains Goodman.

The system, called *Kuder® Navigator*, helps middle school and high school students explore job and training options. “It gives EMCC insights that help us plan our CTE programs. It also lets us keep a close eye on the numbers of students whose assessment results point to energy-related careers,” explains Goodman.



▲ EMCC Career and Transfer Center Program Advisor Izelle Silva and EMCC student Kasey Goodbody view the Kuder system.

Fields admits he was “surprised when the system returned results that were spot-on for my interests. It pointed me toward the energy, engineering and mathematics fields. My dad works at a power plant, so I had a general idea of what I wanted to do, but this was confirming.”

According to Kuder President Phil Harrington, career planning doesn’t need to be difficult, but it does need to be done the right way. “Fields is one of the smart ones who focused on career planning,” he explains. “Too often, students and parents focus only on college planning. That’s the wrong approach. College selection and education planning are part of the process after the right career path has been identified.”

Fueling the Future Workforce

Filling growing gaps in the energy workforce with a new crop of qualified workers is the industry’s biggest challenge. It’s one that the Center for Energy Workforce Development (CEWD), a nonprofit consor-

tium of electric natural gas and nuclear utilities and their associations, is tackling head-on.

Founded in 2006, the CEWD works closely with stakeholders in education, government agencies and the energy industry to leverage resources and practices that address current and future energy workforce needs. According to the CEWD’s projections, by 2020, almost half the nation’s skilled workforce may need to be replaced due to retirement or attrition. In Arizona’s Sun Corridor, where the population is expected to grow to over nine million by 2040, energy providers are facing a workforce crisis. A projected 55 percent of energy workers will need to be replaced over the next decade.

“The program at Estrella Mountain is a best-in-class example of our Get Into Energy Career Pathways,” says CEWD Executive Director Ann Randazzo. “Students are able to build basic skills, receive industry-recognized credentials like our ANSI-accredited Energy Industry Fun-

damentals certificate and start education pathways that lead to great jobs in the industry.”

Harrington agrees: “The Get Into Energy program and partnership between CEWD and EMCC is a perfect model of how building a talent pipeline for all industry clusters should work.”

Harrington pointed out that CEWD uses *Kuder® Journey*, the postsecondary and adult version of Kuder’s online education and career planning system, for its “Get Into Energy Career Pathways for Low Income Young Adults” initiative.

“The students benefit from the e-Portfolio and career navigation services [in *Journey*], and our career coaches get a great case management system,” says Randazzo. “It’s the only system we’ve seen that meets the needs of all the stakeholders.”

The Power of Partnership

Situated about 50 miles west of Phoenix in Tonopah, Arizona, the Palo Verde

Nuclear Generation Station celebrated its 20th consecutive year as the nation’s largest power producer in 2012. A major employer in the region, the company expects to hire over 800 employees within the next five years. Arizona Public Service (APS), which operates and is part owner of Palo Verde, reached out to EMCC to help feed its workforce over a decade ago.

“It was through APS’s involvement with the CEWD that we were brought into the mix,” says Goodman. “They basically said, ‘You’re coming along with us. We’re in this together!’”

For APS, joining forces with Goodman and EMCC was a no-brainer. “Nearly a quarter of APS’s workforce is eligible to retire today, so we are concerned about our talent pipelines,” says Lori Sundberg, senior vice president, human resources and ethics at APS.

“Clay Goodman and the Estrella Mountain team have demonstrated time and again that they understand the needs of business, know how to work with business and take concrete actions to help us ensure we have the talent we need today and tomorrow,” says Sundberg.

The CEWD also knows the power of partnership. Its approach is to work with its industry members and community colleges throughout the country to recruit and train students in a common way for employment in the energy industry. The CEWD devised an energy competency model focused on developing baseline energy employability skills that are essential to any job.

“The program emphasizes personal effectiveness and the importance of academic and workplace competencies,” says Goodman. EMCC’s Energy Institute curriculum lays the groundwork

for students to learn these competencies, as well as offers coursework necessary to earn foundational certificates that are transferrable to energy employers across the country.

The CEWD competency model is an excellent complement to the newly adopted Arizona Employability Skills Standards developed by the Arizona Skills Standards Commission. The Commission worked in conjunction with state businesses and industries to identify and define critical skill sets students need to acquire to be successful in the workplace.

As students move through the Get Into Energy Pathway, they are not only learning about the energy industry but are also acquiring the specific soft skills that industry has defined as important. “Technical skills will help get you the job, and the soft skills will help you keep it,” explains Goodman.

Visit NOCTI Booth #512

NOCTI Assessments

- Measure skills for almost every technical area
- Include cognitive and hands-on components
- Provide valuable feedback for improvement
- Demonstrate students’ college and career readiness

Help Students Get the Credit They Deserve!

- Over 20 NOCTI assessments recommended for college credit.
- 1500+ colleges and universities participating in 50 states.
- Additional titles pending!

www.nocti.org
800.334.6283

Generating Momentum


Jason Martinez, a member of the EMCC counseling faculty, works closely with Get Into Energy program students like newcomer Michael Fields to help them refine their career choices through guided exploration. "It's great working with these students," says Martinez. "They're focused

on this industry and committed to putting in the time necessary to be successful."

"As a former nuclear plant operator for the U.S. Navy, and a senior nuclear reactor operations instructor for the commercial nuclear power industry, I'm quite impressed with the content of the curriculum, as well as the quality of the instruc-

tion students at EMCC receive," says Deon Clark, EMCC adjunct instructor of occupational education. "The instruction that these students receive transfers directly into the knowledge and skills necessary for employment in the energy industry."

Fields credits EMCC's Get Into Energy program with opening his eyes to the merits of professionalism in the workplace and giving him the direction he needed to pursue his energy career goals. Motivated by the program's introductory courses, he says he plans to "continue to work hard to make myself the best person that I can be, both on the job and in my personal life." With the skills he's gained, Fields says he is determined to be "the best applicant for every job that I apply for and the best employee and coworker."

According to Kuder President Phil Harrington, it is no surprise that effective career and education planning has led to a success story like this: "When students can align their personal interests and skills with the local workforce needs, you have a perfect match that creates efficiencies for everyone and helps to grow the economy." 

Amy Khokhar is an education writer and communications consultant. She contributes to the quarterly publication *Kuder User News* and edits professional development and career-planning curricula. She can be reached at communications@kuder.com.

Explore More

For more information about Estrella Mountain Community College's Get Into Energy program, visit www.estrellamountain.edu/getintoenergy. To learn more about the CEWD and Kuder, Inc., visit www.cewd.org and www.kuder.com.



ACTE Learn more about opportunities in emerging, sustainable energy sectors at www.acteonline.org/sustainability.

www.acteonline.org

Your students aren't ONE SIZE FITS ALL



why should your training be?

Help your students enhance their career opportunities with industry-recognized credentials. Customize your career and technical education programs with NCCER's curricula and transform your students into skilled craft professionals.

Call us toll free at **888-622-3720** to get started.



The Standard for Developing Craft Professionals

nccer.org

ELECTRONIC SNAP CIRCUITS®

HANDS-ON SCIENCE



Visit our booth
VISION 2012
#630

Create Your Own Exciting Experiments

Snap Circuits® gives an in-depth exploration into electricity and electronics. Ideal for use in home schooling, middle schools and high schools, where students will grasp the basic principles, while doing hands-on projects.

The Student Curriculum Guides, written with the help of educators, cover all topics related to electricity and electronics being taught in middle schools and above. Includes real world applications and problem solving quizzes. A Teachers Guide is also available to test your student's knowledge.

| | |
|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Snap Circuits, Jr. Model SC-100 \$29.95 Contains Over 30 Parts Build Over 100 Exciting Projects | Snap Circuits Pro Model SC-500 \$89.95 Contains Over 75 Parts Build Over 500 Exciting Projects |
| Snap Circuits Model SC-300 \$59.95 Contains Over 60 Parts Build Over 300 Exciting Projects | Snap Circuits Extreme Model SC-750 \$119.95 Contains Over 75 Parts Build Over 750 Exciting Projects |

FOR MORE INFORMATION, CALL OR WRITE TO:
Elenco® Electronics, Inc. • 150 Carpenter Ave. • Wheeling, IL 60090 U.S.A.
 (800) 533-2441 • (847) 541-3800 • FAX: (847) 520-0085
 Web site: www.elenco.com • e-mail: jeff@elenco.com