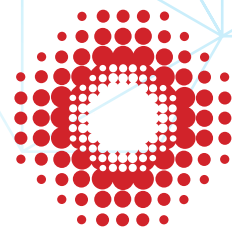


# INTER

NEWS OF NATIONAL ENERGY FOUNDATION

# NEEF

2014 CAREERS EDITION





# CEWD

Never before has there been a bigger need for young people to enter the energy workforce. National Energy Foundation (NEF) and the Center for Energy Workforce Development (CEWD) have partnered to make that happen. The partnership broadened just over 2 years ago after many years of collaboration. As it became apparent that a shrinking energy workforce and an ever-increasing demand of energy was a challenging combination, both organizations viewed this as a call to action.

Some of the results have been online curriculum, nation-wide support for career curriculum during energy week – October 13 – 17 – and most importantly, a powerful new poster called *Picture Yourself in an Energy Career*. New teacher and student guides called “The Fundamentals of Energy,” will also soon be available and will round out this tremendous curriculum. NEF would like to thank CEWD for such an effective and enjoyable working partnership.




# Career Poster

The development of a new poster is one of the most instrumental aspects of the NEF strategy on career education. The *Picture Yourself in an Energy Career Poster* is an exciting new addition to the line-up of curriculum provided by NEF and a powerful addition to the **Academy of Natural Gas Fulfillment**. The poster gives students a glimpse into a potential future working in the rapidly growing world of energy. Energy consumption is showing no signs of slowing and that means job security. Regardless of the skill set or level of education a student will achieve, NEF will help students formulate a plan for success!

Located on the back of the poster are panels with activities and resources for students and teachers. When students participate in the activity “Who Wants to Be an Energy Millionaire” they might just find their dream job. As teachers and students continue through the logical flow of the poster, they will also figure out that job is completely in reach. “Your Perfect Path,” is a resume writing activity that provides a road map to make dreams come true. Other panels cover specifics of different energy jobs and the education levels necessary to obtain those jobs. Additional links and resources from many reputable organizations are also available to help students along the way.

NEF and many of its partners have observed an increasing need for a new generation of energy professionals. There is currently an aging energy workforce that has enjoyed stable jobs for a long time but will soon leave some very big shoes to fill. We don't want students to miss this once-in-a-generation opportunity to fill those shoes! The *Picture Yourself in an Energy Career Poster* was expertly reviewed by the Center for Energy Workforce Development and the Salt Lake Division of Workforce Services, two organizations who share NEF's passion for career building.

*Picture Yourself in an Energy Career* is now available at [www.NEF1.org/store](http://www.NEF1.org/store). For additional questions or for custom branding, contact Ian Wright at [ian@nef1.org](mailto:ian@nef1.org).



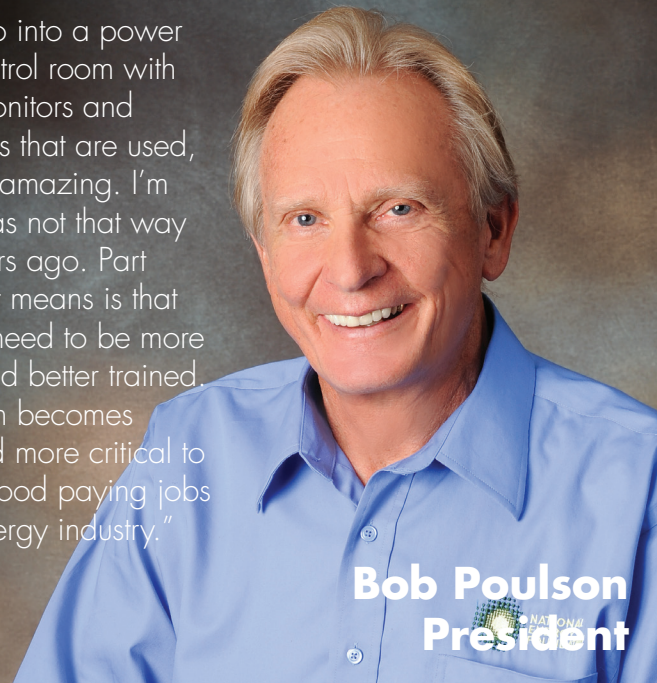
**Picture  
YOURSELF**  
in an Energy Career





# Careers in Energy

"If you go into a power plant control room with all the monitors and computers that are used, it's pretty amazing. I'm sure it was not that way 30+ years ago. Part of what it means is that workers need to be more skilled and better trained. Education becomes more and more critical to finding good paying jobs in the energy industry."



**Bob Poulson**  
President

## Introduction

Careers have been a theme around NEF for the last year, as we have developed a new poster and curriculum around them. Internally, careers have come up a lot lately, too, as the NEF executive team prepares to conclude three incredible careers when they retire at the end of this year. Bob Poulson, Dari Scott and Sunny Dent have been winding down their time at NEF and have spent much of the last year preparing others in the organization to take the next step in their own careers. Countless hours have been spent on the part of the outgoing executive team to impart what they have learned over their combined nearly 70 years of service at NEF on the new executive team and the rest of the NEF staff. The result is a top to bottom staff that is ready to seamlessly take NEF into the future. In honor of everything Bob, Dari and Sunny have done for energy education, this article will take a quick look at the past, present and future of energy careers through the lens of those with experience.

# Bob

## Past:

**Bob Poulson has always been able to provide historical context at NEF. He has been key to building the strength of the organization and documenting the ups and downs along the way.**



Bob Poulson has served as a historian of sorts for the organization and currently has the longest career at NEF. We asked Bob what the biggest changes in energy careers have been over his tenure at NEF and, not surprisingly, technology surfaced as one of the biggest, if not the biggest change in energy. Recognizing that changes in technology have an enormous impact on energy education is a huge part of why NEF has remained relevant for over 38 years. You can see the adaptiveness of NEF through the curriculum produced. NEF first printed an alternative fuels vehicles poster in the early 90s, way ahead of the national curve. Bob may be from the "old-school" energy world but his philosophies toward energy and education have always remained on the cutting edge. Foresight into the importance of energy education has not only helped this non-profit be successful but has also helped countless students that were introduced to NEF messages find their own successful paths through an ever-changing occupational landscape.

# Dari

## Present:

Dari Scott has worked personally with a significant portion of the staff every day. This is largely due to her role as the leader of the operations team and a reliable friend and mentor.

We asked Dari about the current state of careers in energy and her response was enthusiastic in typical Dari fashion. As a former teacher, Dari has an innate ability to help those around her realize their potential through the power of learning. The numerous opportunities for careers in energy are reflected in the curriculum produced by NEF. Dari has had an influential role in guiding the teaching philosophies of the organization over the years, taking into account many different learning styles and skill sets. Artists, mathematicians, writers, builders, accountants, engineers or just about any other discipline can find a successful home in the world of energy. NEF materials currently cover natural resources, energy safety, energy efficiency, uses of energy, electrical generation, mining and minerals and that only scratches the surface. Dari's ability to teach and mentor others has led to a culture of sharing knowledge and experience within NEF. Knowledge is power, and helping students, teachers, families and colleagues recognize that they have unlimited opportunities through exploring the world of energy will not only be one of the lasting legacies of Dari's career but also for NEF itself.

"I encourage everyone as they evaluate and choose a career to get involved with energy. The industry offers unique, diverse opportunities from engineering to education. It will always be at the forefront of influencing our lifestyles and our futures. In other words, energy provides a life-long career choice."



We asked Sunny what she estimates the world of energy might be like over the next 30 years. It is interesting that she addresses passion because that is a great word to describe the work Sunny has accomplished over her career at NEF. As a true expert of energy education, Sunny has helped secure a successful future for NEF by thinking years down the road. She has also helped countless students, who were reached by NEF over the past 20 plus years, plan for their future. Whether helping a student understand the potential for success in energy or helping a whole community understand how to most effectively use energy, Sunny has always been an excellent teacher and mentor to those around her. Sunny's quote helps communicate that the energy literate citizen will not only be the wise steward of the earth's natural resources, but could also make a great living being the generator, operator, manager, engineer or teacher of energy production, systems, uses or distribution. With a little planning for the future, today's students have the opportunity to have their very own, long and successful career in energy.

"People with a passion to serve humanity by providing the critical energy resources that fuel society will thrive in the challenging energy industry jobs of the future. Advances in science, technology and engineering, along with a diverse and well-trained workforce, will efficiently and effectively provide new and improved products and services. The energy literate citizen will be a wise steward of the earth's natural resources."



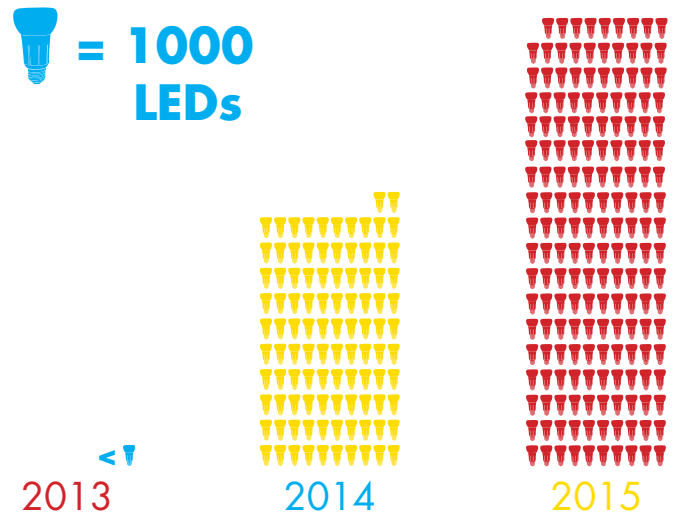
# Sunny

## Future:

Sunny has always been a forward thinker and has been instrumental in creating a plan to ensure the long term success of NEF and its employees.



# More LEDs in Think! Energy Kits Than Ever Before



## Back To School

### For The Teachers

Fall is always exciting for National Energy Foundation as it marks a time when students and teachers prepare for another year of growth in, and out, of the classroom. NEF continues to strive for excellence in energy education and is proud to be a catalyst to support teachers across the country.

This July, PPL Electric Utilities sponsored six, professional development workshops called **THINK! ENERGY with E-Power: Our Earth, My Home**. “They were designed to enhance and expand K-12 teachers’ knowledge of sustainable practices using science, technology, engineering and math-focused lessons in electrical generation using solar, wind and water,” said program director, Kelly Flowers. These full-day workshops offered teachers hands-on STEM experiences and concepts about the functionality of solar cells, wind turbines and hydroelectric dams as well as general electrical generation. These six E-power workshops hosted 190 Pennsylvania teachers. Participating teachers learned to integrate energy and sustainability into their instruction. NEF facilitated the process of helping teachers receive seven 1-hour, Act 48 credits for re-certification.

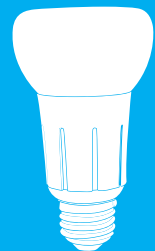
The **THINK! ENERGY with E-Power: Our Earth, My Home Teacher Workshops** have received numerous positive evaluations. Participants were very pleased with the valuable materials, information and teaching ideas. Students will see the benefits of the teacher workshops, too, when this new and exciting curriculum hits the classroom.

### For The Students

As students and teachers head back to school, NEF programs are back in full swing with LEDs being distributed to more **THINK! ENERGY** participants than ever before. Delivering energy efficiency kits with high-quality products is a staple in NEF’s energy education strategy. The organization continually improves upon kit contents as resources and technologies become more readily available.

NEF hopes to help further transform the market from CFLs to LEDs. While CFLs are a great option for energy-efficient lighting, using LEDs demonstrates a commitment to going the extra mile. The following NEF programs will benefit from newly added LED bulbs this fall:

- **Consumers Energy – Innovation**
- **THINK! ENERGY with Consumers Energy with Lansing Board of Water & Light**
- **THINK! ENERGY with Efficiency UNITED**
- **PPL Electric Utilities:**
  - **Take Action!**
  - **Bright Kids**
  - **Community in Action**
  - **Innovation**



According to program director Robin Reinarts, “We will be moving entirely to LEDs statewide for the Michigan programs.”

Using LED light bulbs will benefit students, their families and sponsors. Their installation will help to reduce energy use and reduce the use of nonrenewable natural resources all while lowering overall costs of utility bills in the home.

# Alternative Fuels Curriculum and Training

**N**ational Energy Foundation has developed exciting new curriculum for **Alternative Fuel Teacher Workshops** in partnership with the Yellowstone-Teton Clean Energy Coalition (YTCEC).

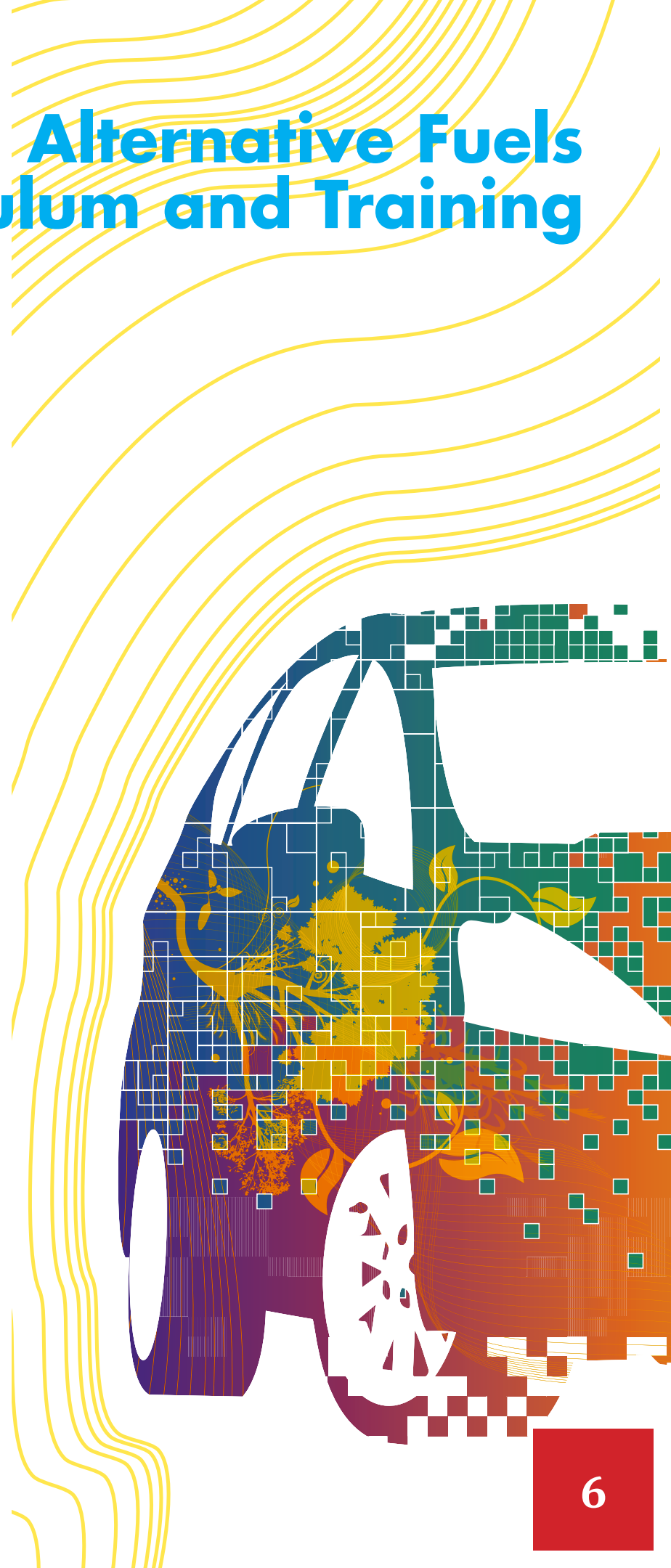
The first round of teacher training was held in Jackson, Wyoming this past June. The training provided teachers and community leaders with the knowledge and tools to make informed transportation decisions. The curriculum was developed to provide teachers, non-profit leaders and community leaders with relevant, accurate and accessible educational materials to teach about alternative transportation fuels and vehicle technologies.

**Alternative Fuels Teacher Workshops** begin with general background information on energy and alternative fuels followed by activities on fuel sources, renewable and nonrenewable resources, electrical generation and energy efficiency. Hands-on science, technology, engineering and math (STEM) based lessons for elementary, middle and high school levels cover idling and air quality, alternative fuels for vehicles such as electricity, biodiesel, hydrogen and more. Once the activities are complete, students can participate in “Jeopardy,” a review game based on the layout and rules of the TV show Jeopardy but with an alternative fuel focus.

Participants follow a recommended agenda that starts by taking an “Energy IQ Quiz” and then moves into several other lessons to learn about alternative fuel vehicles and best practices in transportation. The alternative fuel training concludes with the activity, “Making Biodiesel,” where participants learn what biodiesel is and then make their own to take home.

In coordination with the new **Alternative Fuels Teacher Workshop** curriculum, and as a part of the ongoing effort to provide the most current energy education materials available, NEF is developing a new *Alternative Fuels Poster*. Keep an eye out, this poster will be available in 2015!

If you are interested in being a part of future workshops on alternative fuels, contact Janet Hatch at [janet@nef1.org](mailto:janet@nef1.org).





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# INTERNEF

News of National Energy Foundation

## 2014 Careers Edition

INTERNEF provides news about programs, materials, opportunities and the progress of National Energy Foundation. We appreciate our sponsors and their commitment to education. It is our goal to share the efforts and successes of energy education.

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# President's Message



Bob Poulson, NEF President

I was 11 years old in October of 1957 when Russia launched Sputnik, the first man-made satellite to orbit the earth and we were shocked to think that Russia was better than the United States at something so important. We were again reminded of our second place status during the "space race." On April 12, 1961, Yuri Gagarin was the first human in space. This was on the mind of President Kennedy when he declared in an address before Congress a month later on May 25, 1961, "I believe that this Nation should commit itself to achieving the goal, before this decade is out of landing a man on the moon and returning him safely to earth". Science, technology, engineering and math became a major focus for education from the late 50's through the 1960's.

That focus allowed the US to achieve Kennedy's challenge on July 20, 1969 when Neil Armstrong made this historic proclamation "That's one small step for man, one giant leap for mankind."

Our nation's standard of living and leadership in the world has had much to do with our development and use of energy. Our future as a nation and world leader will greatly depend on the wise use and development of our energy resources. Exploring new technologies and innovative solutions to meet the growing demand for energy is a new frontier for students to dream about and conquer just like the moon was for Neil Armstrong in 1969. Energy literacy is a key ingredient to that future and is the proclaimed mission of National Energy Foundation. The way to accomplish literacy is through education and the way to accomplish energy literacy starts with focusing on STEM education.