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## ABSTRACT

This document highlights the school-to-careers (STC) partnerships connecting workplace experiences to classroom learning to prepare students for successful employment in the utilities industry. First, the current state of the utilities industry and careers in the utilities industry are reviewed. Next, the following organizations and employers are profiled: (1) the National Employer Leadership Council (NELC) Employer Participation Model (a resource for employers considering involvement in STC and education and community organizations seeking ways to reach out to employers); (2) Public Service Company of New Mexico, Albuquerque (conducting career talks to cultivate awareness of the energy field); (3) Detroit Edison (providing practical hands-on experience for young people to examine how computer science, engineering, and business administration apply in the real world); (4) Xcel Energy Corporation of Minneapolis, Minnesota (offering students opportunities to shadow with employers working in electrical and natural gas operations); (5) Williams (Tulsa, Oklahoma) (providing postsecondary internships in the natural gas industry); (6) Duke Power (Charlotte, North Carolina) (enhancing the knowledge, skills, and perspectives of science teachers); (7) New York State Electric and Gas, Lansing (energizing energy curricula); and (8) UGI Utilities, Inc. (Reading, Pennsylvania) (teaching employers and the community how to become involved in career awareness and development activities in school and at work). Concluding the booklet are strategies for getting involved in STC and a glossary. (MN)

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# Best Practices in School-to-Careers

## The Utilities Industry

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## National Employer Leadership Council

The National Employer Leadership Council, an initiative of the National Alliance of Business, is a business membership organization dedicated to expanding and enhancing employer involvement in School-to-Careers. The NELC advocates and supports School-to-Careers initiatives combining classroom courses with real-life learning to ensure all students meet high standards and, therefore, are prepared for continuing education and the cutting edge jobs of the 21st Century. NELC members and the

NELC Leadership Board of senior business executives are committed to sustaining the positive changes in teaching and learning taking place across the country as a result of School-to-Careers.

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## Introduction

This booklet is part of a series that demonstrates the scope and importance of employer involvement in School-to-Careers in specific industry sectors. This publication focuses on partnerships between educators and companies that rely on a skilled workforce for the utilities industry. *Best Practices in School-to-Careers: The Utilities Industry* was prepared by the National Employer Leadership Council and the National Alliance of Business to highlight and expand utilities involvement in School-to-Careers.

Across the country, employers from all industries are supporting School-to-Careers as a critical link in preparing students for future education and careers. School-to-Careers has brought together employers, educators, students, and community leaders to build a coordinated series of activities that provides students with a clear understanding of the education and career options available to them and the skills and competencies required for success.

While employers are committed to improving the core academic achievement levels of all students and preparing them for success in

all careers, employers in different industries can play unique roles in enhancing learning for specific students with particular interests and aptitudes. Together, the activities of all employers provide opportunities to connect with all students so they can learn, grow, and ultimately take control of their own educational and career goals.

*Best Practices in School-to-Careers: The Utilities Industry* highlights the efforts of six employers and one “intermediary” organization that helps young people develop the skills needed in the utilities industry. While each employer is recognized for a specific activity or series of activities, together they demonstrate the need to create multiple opportunities for young people to learn and grow:

1. **Public Service Company of New Mexico, Albuquerque, New Mexico:** Conducting career talks to cultivate awareness of the energy field.
2. **Detroit Edison, Detroit, Michigan:** Providing practical hands-on experience for young people to examine how computer science, engineering, and business administration apply in the real world.

- 
3. **Xcel Energy Corporation, Minneapolis, Minnesota:** Offering students opportunities to shadow with employees working in electrical and natural gas operations.
  4. **Williams, Tulsa, Oklahoma:** Providing post-secondary internships in the natural gas industry.
  5. **Duke Power, Charlotte, North Carolina:** Enhancing the knowledge, skills, and perspectives of science teachers.
  6. **New York State Electric & Gas, Lancaster, New York:** Energizing energy curricula.
  7. **UGI Utilities, Inc, Lancaster, Pennsylvania:** Teaching employers and the community on how to become involved in career awareness and development activities in both school, and at work.
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## The Utilities Industry

We take it for granted, but energy is one of our nation's most critical resources. It powers our cars, runs our computers, lights our homes, and even heats and cooks our foods.

Energy is also closely linked to our nation's economic growth. The use of electricity has grown dramatically in the last 50 years, and according to the U.S. Department of Commerce, energy mirrors our nation's growth domestic product (GDP), the nation's gauge of economic health. While the overall intensity of energy use has decreased by more than 40 percent since 1960, the intensity of electricity use in the U.S. economy has increased by more than 25 percent over the same time period. Electricity powers

industrial machines, tools, computers, and appliances. Its versatility is unparalleled, and its substitutes are few.

Consequently, the utilities industry is a major business sector in the United States. Today, the \$216 million-plus industry represents 4 percent of the gross national product, and employs a half million Americans. As such it plays a critical role in the economic health of thousands of communities, and in some cases the primary source of employment.

The utilities industry has been dramatically changing over the past several decades. Technological innovation has diversified the way in which energy is produced. Increasingly, renewable sources of energy such as solar, wind, and geothermal power are

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being used to produce energy. In addition, national priorities such as public health and land conservation are radically changing the way more traditional resources such as nuclear power, coal and gas are being produced.

Production of energy has also become more expensive. In many states across the country there is not enough supply of energy to meet demand. Commitments to more environmentally friendly power and increased nuclear power plant construction have driven up the price of production. In some states, electricity rates have skyrocketed by more than 50 percent.

Concerns over energy supplies have prompted utilities companies to invest in efforts to improve the quality of their future workforce. A growing number of utilities companies are launching outreach projects with secondary and post-secondary students to ensure that their future workforce has the academic, technical, and critical thinking skills necessary to handle future energy demands. Companies are launching career awareness and career exploration, to get individuals with the right skills, at the right place, at the right time to boost workforce competitiveness.

## Careers in the Utilities Industry

There is a wide array of career opportunities within the utilities industry. Employees such as environmental engineers can work outside, marketers can have office jobs. For customer service representatives, it is critical to be a team player, while linemen deal primarily with machines. Some

workers spend their entire day number crunching while press officers write proposals and press releases. In an attempt to encourage students to enter the industry, Southern Company, in Atlanta, Georgia, has identified several jobs that are prevalent within the industry:

Job Title	Job Function	Education
Environmentalist	<ul style="list-style-type: none"> <li>• Control the polluting by-products of energy production to protect air and water quality, wildlife and plantlife, and human health</li> <li>• Analyze legal and regulatory aspects of formulating and complying with state and federal environmental laws</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced technical degrees</li> <li>• College science degrees</li> <li>• Expertise in:                             <ul style="list-style-type: none"> <li>– Air and water quality</li> <li>– Chemistry or chemical engineering</li> <li>– Environmental law</li> <li>– Environmental studies</li> </ul> </li> </ul>
Accounting/Financial Analysts	<ul style="list-style-type: none"> <li>• Work on budgets, purchasing, forecasting, auditing and corporate finance</li> <li>• Plan strategic company developments</li> </ul>	<ul style="list-style-type: none"> <li>• College degrees in business administration</li> <li>• Advanced degrees in finance or accounting</li> <li>• High school concentration in business education, math, and computing skills</li> <li>• Keyboarding skills, spreadsheets, word processing, and project planning software is helpful</li> </ul>



Job Title	Job Function	Education
Marketing And Communications Specialist	<ul style="list-style-type: none"> <li>• Expand operations with new products and services</li> <li>• Manage energy products and services</li> <li>• Buy and sell power on the spot market</li> </ul>	<ul style="list-style-type: none"> <li>• College degree in business administration, finance, marketing, or advertising</li> <li>• Familiarity with word processing and market forecasting</li> </ul>
Customer Service Representatives	<ul style="list-style-type: none"> <li>• Offer technical advice on energy use and conservation in homes, office buildings, factories, and other workplaces</li> <li>• Assist customers with billing questions and routine emergency requests</li> </ul>	<ul style="list-style-type: none"> <li>• High school or college education</li> <li>• Good interpersonal skills, computer and keyboarding skills, solid mathematical skills, and the ability to learn the scientific concepts of energy conservation</li> <li>• Good telephone and computer skills</li> </ul>
Lineman	<ul style="list-style-type: none"> <li>• Get power from the plant to the consumer</li> <li>• Plan, build, and maintain a transmission and distribution system</li> </ul>	<ul style="list-style-type: none"> <li>• Strong mathematical and computer skills</li> <li>• Good analytical and technical skills</li> <li>• Enjoy physical activity</li> </ul>

## School-to-Careers: Addressing Utilities Companies Needs

Utilities companies, as all other companies need well-prepared, job-ready workers who can think on their feet, learn on the job, and take on new challenges. Employers acknowledge that the key to success is a good education. As such, an increasing number of companies are working with primary and secondary schools to participate

in School-to-Careers (STC) activities. Designed to make education more relevant and exciting to all students, STC activities usually contain three core elements:

- School-based learning – classroom instruction based on high academic and business-defined occupational skill standards.

- Work-based learning – career exploration, work experience, structured training and mentoring at job sites.
- Connecting activities – integration of classroom and on-the-job instruction, matching students with participating employers, training mentors, and building other bridges between school and work.

STC activities have a positive impact on all employers, students, and teachers involved:

- **Employers** develop a structured system to provide individuals with the critical thinking skills needed to succeed in the workplace. They also achieve significant return-on-investment through decreased training and recruiting costs and valuable productivity by student workers who contribute to key business functions within the organization.

- **Students** understand the relevancy of their academic studies and how it applies to life and work. For some students, contextual learning compliments “book learning.” For other students, workplace learning awakens a dormant interest in academics. Consequently, students take harder classes, are less likely to drop out, and are able to refine their career goals.
- **Educators** gain access to timely information, resources and training to improve education opportunities for all students. They also see how the real world applies to classroom and answer the question, “why do we need to learn this?”

STC is an ideal strategy for showing young people how education is relevant to their future careers. STC also allows employers direct access to those interested in developing the employability and industry-specific skills required for success in the utilities industry.

## Implementing School-to-Careers: The Employer Participation Model

The National Employer Leadership Council's *Employer Participation Model* (EPM) provides a clear framework for employer involvement in STC activities. The EPM is a resource for employers and, in turn, for education and community organizations searching for ways to reach out to employers. Employers can participate in STC by working with students or focusing their efforts on teachers.

### I Working with Students

The NELC's Employer Participation Model outlines a continuum of activities, which support student learning. These activities help students: 1) become **aware** of the wide range of careers and the skills required to succeed; 2) **explore** different career areas of interest in a way that supports their academic

achievement; and 3) **prepare** for immediate or future entry into multiple career paths.

In the best STC initiatives, teams of employers work together to offer the full spectrum of opportunities to students. The diagram below illustrates the different types of activities employers can provide.

"Stage"	Career Awareness	Career Exploration	Career Preparation
EPM Activity	Career Talks	Job Shadowing	Internships
	Career Days/Fairs	Job Rotations	Apprenticeship
	Worksite Tours		Mentoring

### Career Awareness: Utilities Industry

Career awareness activities can help clarify the array of career opportunities within the industry by simply introducing students to workplaces. Employers can visit schools to discuss their jobs and host on-site tours of businesses

and building sites. An emphasis on the basic and core skills required of workers is an important component of career awareness activities. Employers often stress how the skills needed for success are developed through core math, science, English and other

academic courses. With the right information, students begin to see the importance of the "basics" to using more advanced engineering, science, and math skills throughout their future learning and in all careers.

**Public Service Company of New Mexico  
Albuquerque, NM**

**Cultivating Awareness About the Energy Field**

An important focus of the Public Service Company of New Mexico (PNM), a combined electric and gas utility, is helping students bridge the gap between school and careers.

Several programs within PNM are designed to teach students from elementary through college about utilities industry careers. The PNM Speakers Bureau, in conjunction with the company's Human Resources department, participates in many career fairs and classroom visits at schools throughout the state of New Mexico. The company focuses on two areas: education and recruitment. PNM's speakers talk about everything from safety issues to what classes will prepare a young person for a career within the company. For example, the company offers a new electric demonstration that features a town whose characters make bad choices in dealing with electricity. The demonstration illustrates the disastrous effects of poor judgment on a community.

PNM has been a participant in the Albuquerque Public Schools (APS) Join-A-School program since the early 1990s, with both an elementary and a middle-school partnership. Since 1994, more than 700 students have worked at the company's utility after school as part of the Albuquerque Business Education Compact (ABEC), and many have gone on to be hired by PNM.

Because PNM is interested in keeping New Mexico students employed in the state, the company has an extensive summer intern program for both students and their teachers. A large number of PNM employees take their turn in the classroom as well, participating in the Junior Achievement Program. The company also funds the Rio Grande Educational Collaborative, a program that provides professional development for educators and educationally relevant projects and programs for students. Included among its programs and services is a dropout reintegration program for students who attended Rio Grande High School.

PNM believes that volunteering and funding student programs allows the company to be a better corporate citizen. Making sure that students know about the exciting careers awaiting them in the utility world is enjoyable for PNM employees and benefits all New Mexicans.

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### **Career Exploration: The Utilities Industry**

**C**areer Exploration activities can open up doors for students who might not otherwise be interested in the utilities industry.

Activities such as job rotations and job shadowing allow students to follow an employee at a company location to

learn about a particular occupation within an industry. These experiences help students learn about the range of skills and responsibilities within a particular industry field. It is important to note that there is not "one way" to enter any specific career.

#### **Detroit Edison Detroit, Michigan**

##### **Providing Practical Hands-On Experience for Young People To Examine How Computer Science, Engineering, and Business Administration Apply in the Real-World**

As a regional energy company whose principal operating subsidiary supplies electricity to more than 5 million people, Detroit Edison is committed to "energizing the progress of society." In order to achieve this goal, the company is committed to improving education quality and promoting awareness about careers.

Detroit Edison is an active sponsor of the Exploring Program, an initiative associated with the Boy Scouts. In this after-school initiative, Detroit Edison employees mentor 10th, 11th, and 12th grade students about careers in computer science, engineering, and business administration. Students explore careers, special interests, and skills by interacting with corporate professionals.

The program is designed to have students meet with employees twice a week to explore posts and train students in the basic skills required to perform jobs. Staff members help students obtain practical hands-on experience and examine how these fields apply in the every day work world. By the time computer students complete their "post" with Detroit Edison, they are expected to apply the knowledge they have learned by creating WebPages and giving a presentation on colleges and universities that specialize in computer science.

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**Xcel Energy Corporation  
Minneapolis, Minnesota**

**Offering Students Opportunities to Job Shadow With Employees  
Working in Electrical and Natural Gas Operations**

Xcel Energy promotes careers in the utilities industry as part of its overall community investment efforts. The company has distributed a careers video for high school students, has held "job shadow" days and offers internship programs at power plants and in other parts of the company. The objective is to make students aware of technical careers at natural gas and electric companies and inspire them to begin preparing for those positions.

Xcel Energy gives students a preview of such careers with its video "Let's Get Technical - Careers in Energy." The video seeks to attract students who, given proper education and training, could enjoy and succeed in technical jobs in the natural gas and electric utility industry. The video shows the scope of utility company operations and how it provides the power for virtually everything the customers do. Xcel's operations span a spectrum of job functions and locations, from wind farms to hydroelectric dams to coal- and natural gas-fired power plants.

Students have been given a closer look at some of these careers during the company's "job shadow" days, which create learning experiences that expose them to the world of professional technical employment. Students spend a day with information technology employees, getting a first-hand look at how those employees do their jobs and what skills they utilize.

Xcel Energy's internship programs offer an even closer look at utility industry careers. Interns at the company's Riverside Generating Plant work in several different plant areas - mechanical and electrical maintenance, operations, engineering, instrumentation and controls, coal yard and plant safety, receiving hands-on experience in each. Xcel Energy has offered student internships in other areas of the company as well.

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## Career Preparation: The Utilities Industry

Career preparation activities are the most intensive STC activities. During these activities, employers help students reinforce their academic skills and support their entry into utilities careers by offering intensive, work-based learning

activities such as internships, apprenticeships, and mentoring experiences. These activities stress the importance of industry-based standards, to help students benchmark their skills to those required in the industry.

### **Williams Tulsa, Oklahoma**

#### **Offering Intensive Work-Based Learning Opportunities to Youth**

The Williams Intern Program is a critical centerpiece to the company's college recruitment efforts. The program provides university students with practical "work-based" experience in a business, engineering, or information technology. The ultimate goal is to provide students with a good perspective of working in a corporate environment while molding their skills and minds to become future employees. Successful internships allow Williams to convert the students to full-time positions and significantly reduce the cost per hire.

Interns who participate in Williams' program are assigned discreet research projects on pressing issues within the industry. Interns are expected to give formal presentations on their research to company staff. They are also encouraged to attend Williams training classes and participate in the company's community service efforts.

A key component of Williams' internship program is the Summer Williams Intern Contest in which interns compete to find the most creative way to integrate *Energy News Live* (the company's energy-based news network) into higher educational institutions. Contestants must develop a proposal highlighting a plan, its purpose and objectives, its intended audience, and organizational information. Entries are judged by a combination of departments, including ENL staff.

Finally, the Williams Intern Program realizes the instructive value of evaluations and feedback in measuring effectiveness. As internships near an end, supervisors submit evaluations of interns and recommendations for hiring. Likewise, interns submit comprehensive evaluations of their experience and comment on various aspects of the company. The two-way debriefing process ensures that the program meets its objectives for both Williams and its interns.

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## II. Working with Teachers

Teachers guide student learning. Exposure to and guidance from employers ensures that teachers reinforce the skills and experiences that students develop through STC initiatives. As outlined in the *Employer Participation Model*, the connection between employers and teachers occurs in two primary ways:

- **Employers Working Directly with Teachers.** Direct relationships between employers and educators are critical to highlighting the academic skills required in the utilities industry. One direct way employers can bolster student achievement and reinforce industry standards is by providing an "Educator in the Workplace" program. These programs provide the scaffolding on which teachers can build a more exciting and relevant learning experience that leads

to new heights of student achievement. In these programs, employers partner with teachers to develop classroom projects and school-based enterprises that help students make connections to the workplace.

Short and long-term "teacher externships" allow teachers to spend time at a workplace to see first-hand the demands of the industry. Teachers then work with employers and other educators to apply lessons learned about the current industry in the classroom. In addition to relating academic skills to real-world experiences, teachers can also stress work skills such as punctuality, reliability, teamwork, and they can stress the importance of academics to personal and economic success. These lessons become more tangible when teachers draw from what they've actually experienced in workplaces.

### Duke Power Charlotte, North Carolina

#### Enhancing the Knowledge, Skills, and Perspectives of Teachers

Headquartered in Charlotte, N.C., Duke Power is one of the nation's largest investor-owned electric utilities. For more than 28 years, Duke Power has hosted teacher workshops for middle school and elementary school teachers in North and South Carolina on energy and the environment. The goal of the program is to provide hands-on assistance to teachers who are looking for help bringing electricity and energy issues directly into the classroom.

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During the weeklong workshop, educators not only hear classroom presentations on electrical production, but also tour the McGuire Nuclear Station and Marshall Steam Station to learn first hand about how fossil, nuclear, and hydroelectric power is generated.

Teachers are also given the opportunity to study how critical water quality is to sustaining a healthy stream or river environment. While working in streams, science teachers learn to assess water quality by first building and then using their "kick nets" to collect aquatic invertebrates. Educators, working side by side with Duke Power scientists, then count the number of aquatic invertebrates in these "kick-nets". Depending on what variety of species is found, educators are able to determine how polluted the water is.

Duke Power's educator workshops, which are free to all attendees, also focus on natural resources stewardship and environmental ethics. In addition to learning about the importance of riparian vegetation in controlling sedimentation and erosion, educators also learn the best ways to talk to their students about 'doing the right things when the is no chance of getting caught doing the wrong thing'.

The Educator workshops are designed to provide balanced, educationally sound, state-of-the-science information on the generation and delivery of electricity and the impact on the environment, as well as provide continuing education credits for teacher certification. Additionally teachers are given notebooks, resource handbooks, and lesson plans to directly integrate what they have learned into classroom curriculum.

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- Employers Supporting the Work of Teachers.** Employers have important roles to play in helping teachers use workplace experiences to promote student achievement. Employers can work directly with teachers to develop curriculum and instructional materials that build basic communication, teamwork, and problem solving skills. Equally important is integrating industry skill standards, where they exist, into academic standards to promote student academic achievement through contextual work-based experiences. Employers can also work more indirectly with teachers by providing educators with access to technology and information and support to increase awareness and skill development of current technology.

**New York State Electric & Gas Corporation  
Lansing, New York**

**Energizing Energy Curricula**

NYSEG recognizes that business leaders play an important role in setting academic standards. As such, the company is both an advocate for change and an active participant in developing School-to-Careers partnerships. NYSEG is uniquely positioned to articulate the knowledge, skills and experiences students need to be successful and productive in the workplace. By joining forces with other businesses in the community, NYSEG works with officials at the state and local level to reinforce the importance of workplace values and help students see the relevance of classroom learning to the world of work.

NYSEG's multi-faceted Educational Services Program enhances schools' instructional programs across the company's facility tours. NYSEG staff participates in a variety of educational programs with an emphasis on energy awareness, safety and career education. These efforts reach tens of thousands of students in local communities every year.

The Western New York Youth Summit is a 10 - county initiative aimed at giving students an opportunity to interact with community leaders. It introduces students to the business world and makes them more aware of businesses' needs - today and tomorrow. This helps create student interest in education, encourages learning through practical application, increases student self-esteem, and enhances fundamental communication skills. Additionally, NYSEG staff is involved in student career programs, the development of work-based learning activities, and serves as representatives on local partnership boards and Workforce Investment Boards.

One key reason NYSEG's Educational Services Program has been so successful is that it consistently and effectively links company initiatives to New York State and national learning standards. The SCANS Skills are clearly reflected in NYSEG's customized approach to career education.

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## Intermediaries

Employer involvement is often facilitated by an "intermediary" organization, which can be non-profit organizations, industry coalitions, or chambers of commerce. Intermediaries broker partnerships between employers and schools to ensure results and quality. They convene the key partners to determine what types of programs and policies are needed to meet the goals of both business and education. Once this set

of programs and policies is outlined, they provide direct services to employers, educators, and young people to ensure that the needs and expectations of all are being met and that additional partners are recruited and engaged in the emerging system.

Utilities companies best respond to and learn from their peers. UGI, Inc., a utility in Pennsylvania with a national presence, is a prime example.

**UGI, Inc.  
Reading, PA**

**Brokering School-to-Careers Workshops**

UGI strongly advocates programs that provide high school students with the knowledge and skills necessary to succeed in both their postsecondary choices and their careers.

For its employees and the community, UGI has created a three-hour workshop, *Learning for the 21st Century*. The workshop brings together employers, educators, parents and community leaders to inform them about the need for high school students to develop top-level academic and technical skills that will better prepare them for higher education and/or employment.

Participants learn why traditional teaching methods are not reaching all students (particularly those in the "academic middle" of any graduating class), and are encouraged to become involved in career awareness and development activities both in school and at work.

As a result of UGI's efforts, the workshop is being delivered in seven states and has received favorable reviews. Representatives of business/education partnerships in states such as Georgia, Missouri, Oregon and Wisconsin have purchased the workshop, and others are considering how *Learning for the 21st Century* can be used to bolster awareness in their regions.

The Utility Business Education Coalition (UBEC), created by the American Gas Association and Edison Electric Institute, owns the workshop and is continually expanding its nationwide availability and use.

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## Next Steps

**W**ith more and more employers participating in STC to help young people develop the skills they need, there are several actions employers can embark upon in STC efforts:

- **Find out what is happening around school-to-careers in your state and community.**

Every state has a STC director and office, and most communities house local STC partnerships. Contacting these individuals and organizations to express your interest in STC will help them connect you and create opportunities to work with teachers and students.

For more information, contact:  
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Email: stw-lc@ed.gov  
Website: www.stw.ed.gov

- **Join Forces With National Employer Leadership Council.** NELC partners receive frequent updates and resources on employer involvement in STC, and become part of a network of thousands of employers who are working together to build STC opportunities for all.

For more information, contact:  
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## Glossary of Terms

The following terms, used throughout this publication, come from the NELC's *Employer Participation Model*, a guide designed to help employers structure their involvement in school-to-careers. For additional information or to receive copies of the EPM, please contact the NELC directly.

### Career Awareness

- *Career Talks*: Employers and employees visit students in the classroom and explain the work in their industry or company.
- *Career Days/Career Fairs*: Special events are typically held to allow students to meet with postsecondary educators, employers and employees, or human resource professionals to learn about education and work opportunities. Career day activities are designed to help students think about their interest and abilities in relation to potential careers.
- *Worksite Tours*: Students visit the worksite, talk with employees, observe the workplace activities, and link to academic learning.

### Career Exploration

- *Job Shadowing*: A student follows an employee at a company location to learn about a particular occupation or industry. Job shadowing can help students explore a range of career objectives and select a career major for the latter part of high school.
- *Job Rotations*: At a worksite, students transfer among a number of positions and tasks that require different skills and responsibilities in order to understand the steps that go into creating a product and/or service, how their own effort affects the quality and efficiency of production and customer service, and how each part of the organization contributes to productivity.

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### Career Preparation

- *Internships*: Students work for an employer for a specified period of time to learn about a particular industry or occupation. Students' workplace activities may include special summer projects, a sample of tasks from different jobs, or tasks from a single occupation. These may or may not include financial compensation.
- *Apprenticeship*
  - Youth Apprenticeship: A multi-year program that combines school- and work-based learning in a specific occupational area or occupational cluster and is designed to lead directly into either a related postsecondary program, entry-level job, or registered apprenticeship program. Youth Apprenticeships may or may not include financial compensation.
  - Apprenticeship (Registered): Registered apprenticeship programs meet specific federally-approved standards designed to safeguard the welfare of apprentices. The programs are registered with the Bureau of Apprenticeship and Training (BAT), U.S. Department of Labor, or one of 27 State Apprenticeship Agencies of Councils approved by BAT. Apprenticeships are relationships between an employer and employee during which the worker, or apprentice, learns an occupation in a structured program sponsored jointly by employers and labor unions or operated by employers and employee associations.
- *Mentoring*: Employee(s) who possess the skills and knowledge to be mastered by a student, and who instructs the student, critiques the performance of the student, challenges the student to perform well, and works in consultation with teachers or youth organizations and the employer of the student.

## Building on the NELC Agenda

The National Employer Leadership Council is a business leadership organization dedicated to expanding and enhancing employer involvement in school-to-careers. The NELC advocates and supports school-to-careers initiatives combining classroom courses with real-life learning to ensure all students meet high standards and, therefore, are prepared for continuing education and the cutting-edge jobs of the 21st century. NELC partners and the NELC Leadership Board of senior business executives are committed to sustaining the positive changes in teaching and learning taking place across the country as a result of school-to-careers.

The NELC recognizes that as the knowledge economy continues to experience rapid change in the nature of work and the type of jobs available, an increasing number of employers, educators, and community organizations are striving for a seamless education system that equips individuals with knowledge that can be upgraded continuously. These systems will be based on defining and articulating strategies for building "knowledge supply chains" (KSCs) that help align education and training activities directly with employer demand.

The development of these systems requires an understanding of how skill *needs* link to skill *development*. The employer community and, as a result, the NELC, is advocating for national, state,

and local education and training systems built on four common principles:

- A clear process to determine and understand **employer demand**. This includes regular and ongoing information on the foundational ("soft") and academic skills required of all workers, as well as the occupation- and industry-specific skills required in a variety of jobs.
- **Benchmarks and standards of competency based directly on this employer demand**. Programs must measure what individuals can *do* in order to ensure that employer needs will be met.
- **Certification and credentialing** of these skills and abilities that are valued and used by employers in the hiring, re-training, and education investment processes.
- **Building curriculum and programs designed to develop these competencies and leading to these certificates and credentials**.

To find out more, contact:

**National Employer Leadership Council**, c/o National Alliance of Business, 1201 New York Avenue, NW Suite 700, Washington, DC 20005. Phone: (800) 360-NELC, Email: [nelc@nelc.org](mailto:nelc@nelc.org)

*The work of the NELC is supported by the employer community and the National School-to-Work Office, a joint initiative of the U.S. Departments of Education and Labor.*





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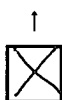
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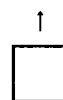
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