

Goal 17: Partnerships for the Goals

Transferring the Skills in Nuclear Power: The Human Factor

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**Nuclear Technology for
the Sustainable Development Goals**

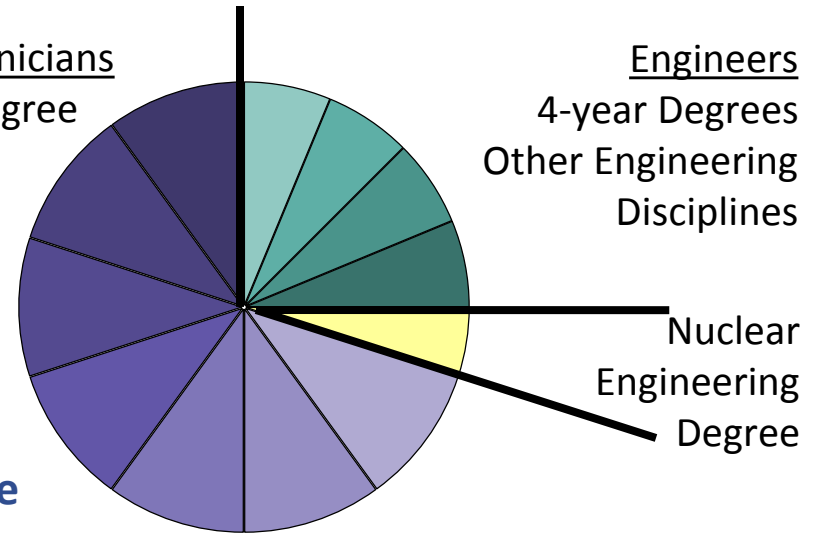


Nuclear Industry Human Resource Needs

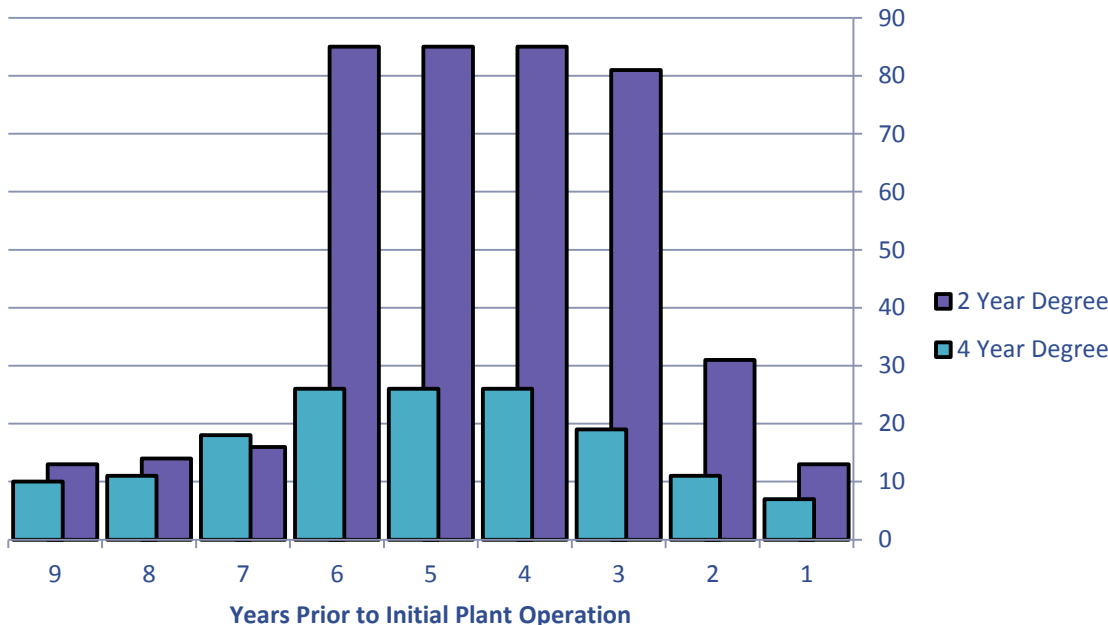
Broader Than Just Nuclear Engineers The "Other than Nuclear" Challenge

Technologists/Technicians
2-year Associate Degree
Backgrounds

Engineers
4-year Degrees
Other Engineering
Disciplines



Timing of Workforce Employment Before
Plant Operation



Roadmap

Texas Nuclear Workforce Development Initiative April 23, 2007

I. Overview

Several studies indicate that there will be significant increases in demand for skilled utility workers and that supply of these workers will not keep pace with this anticipated growth. With the potential for new nuclear power plants in Texas, coupled with aging workforces at our existing nuclear power plants (NPP) facilities, extraordinary actions will be necessary to provide the qualified work force requirements later this decade and next. This anticipated shortage of skilled utility workers is a key challenge for the Texas energy industry.

The traditional staffing pools for earlier NPPs included a robust, cold war nuclear navy and a nuclear construction work force that was running out of work. The current nuclear navy pipeline is significantly reduced and the construction trades are facing the same dilemma as is discussed in this report. As a result, development of new sources of qualified workers is necessary to meet our future staffing requirements.

Many of these positions will require a minimum of a 2-year technical degree or a 4-year engineering or related degree. We believe that if we collaborate as industry, education, and government, that we can and will be successful in meeting these future workforce needs.

II. Collaborating Entities

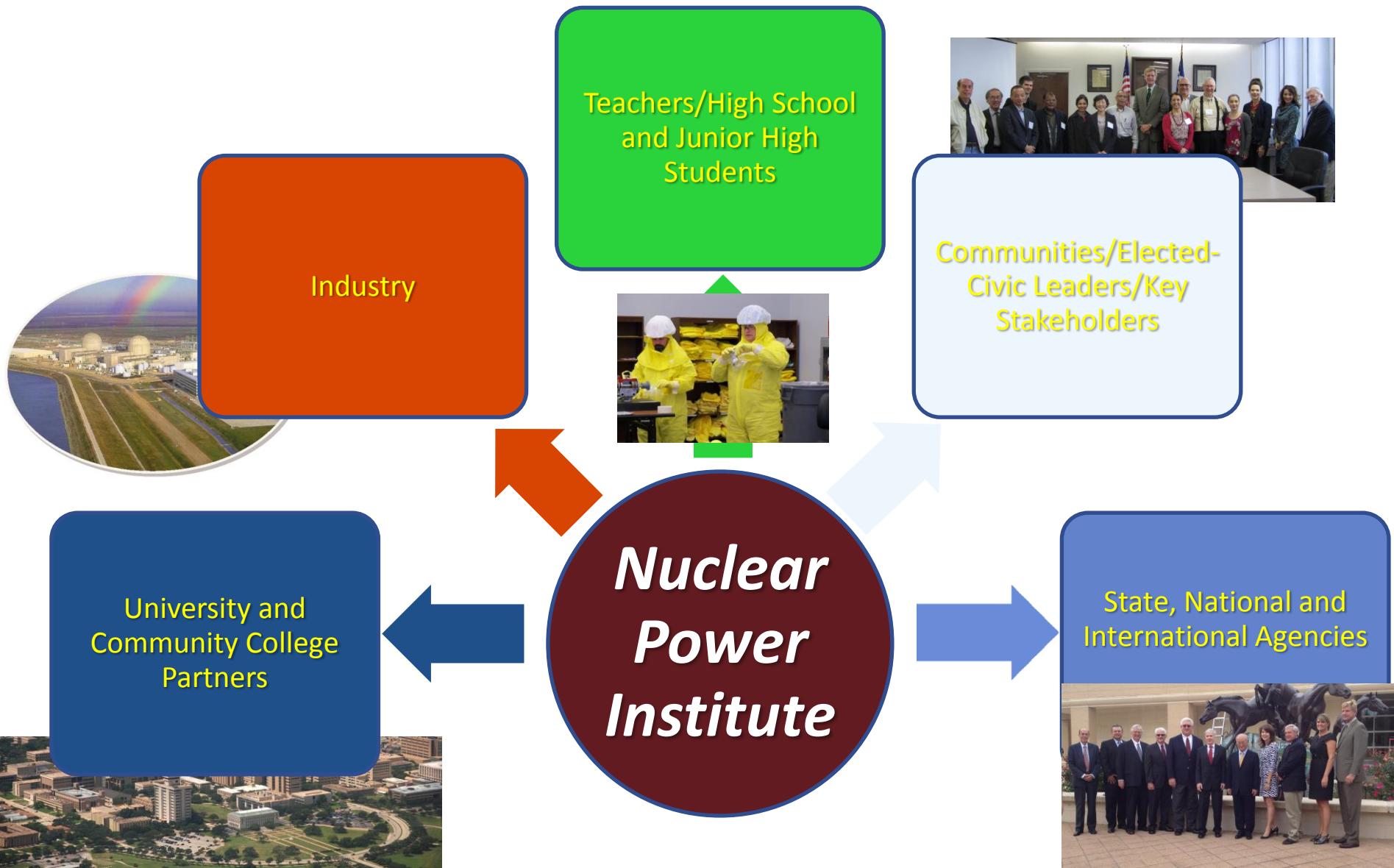
This initiative is based on a collaborative approach between NRG (STP Nuclear Operating Company), TXU Power, Exelon, Texas A&M University (TAMU), and Texas State Technical College (TSTC) with direct support from the Texas Workforce Commission (TWC) and additional support from various independent school districts (ISDs), local communities, and area colleges.

III. Needs

NRG (STP Nuclear Operating Company), TXU Power, and Exelon have all announced their intentions to license and build six new nuclear power plants in Texas. These plants will require approximately (c. 2,000) highly qualified steady state personnel to operate and maintain them. The hiring period will commence in late 2008 with the intent to reach steady state staffing levels by 2015. In addition, the currently operating (four) NPPs are facing high retirement rates later this decade which will require additional replacement staff. STP is projecting the need to hire an additional 400 people between 2008 and 2014 to replace these retirees. TXU Power anticipates a similar impact. The Texas NPP owner/operators are working together to address these needs.

Our mission is to gain maximum appropriate involvement between industry, area ISDs, colleges, universities, and local and state government entities to develop and fund a workforce pipeline that will meet our combined out-year resource needs with a well educated and qualified work force.

Nuclear Power Institute Response to this Challenge:Build a Partnership.....



International Collaborations for Human Resource Development Partnerships for Global Nuclear Power Development

Scientific Visits

Group Fellowship Training

Specialized Training



*Unique
Facilities*



*Tailor Made
Programs*



Impacts of Partnerships

- The outreach effort to teachers and students has been very successful
- Now involves ~1000 students in 11 school districts
- Primarily focused in the vicinity of the nuclear power plants
- The results:
 - Of any group of students graduating from high school/secondary schools and going on for further education
 - Approximately **15%** will study in STEM fields
 - For those students who have participated in NPI programs, that percentage is **83%**
- In addition, these students:
 - Have visited nuclear power plants
 - Have become familiar with nuclear energy
 - Taken away anxieties and mysteries of nuclear energy
- Building a generation that is knowledgeable, comfortable and supportive of nuclear energy

83%

**Going
Into
STEM**

15%



Valerie Segovia,
Director of NPI
Outreach and
Development

Partnerships: Reaching the Youngest Generation

Science on Saturday: To communicate the excitement of Science and Technology



A Key Goal!

Thank you!

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