

# NPI

NUCLEAR POWER INSTITUTE

## *Building Acceptance Among Youth: From NPI to the IAEA to Member States*



*IFNEC Latin America Nuclear  
Energy Stakeholder Conference*

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Buenos Aires, Argentina*

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Director of Outreach  
and Development*



**TEXAS A&M**  
UNIVERSITY®



**TEXAS A&M ENGINEERING  
EXPERIMENT STATION**

## Mission

- To **develop the human resources** for the future of the nuclear industry, with an emphasis on the disciplines beyond nuclear engineering, through a partnership with industry, universities, community colleges, high schools and junior highs, students, teachers, communities, and key civic and elected leaders.

## Focus

- Working with industry, **creating academic and outreach programs** to prepare students for careers in the nuclear industry, inform and attract students about these opportunities, and stimulate interest in STEM (science, technology, engineering, & math) majors.

## **We believe outreach can:**

- ✓ create interest in future careers in nuclear technology and capture valuable knowledge;
- ✓ build community based support for nuclear power programs;
- ✓ and bring about public acceptance.

# Goal: Public Acceptance?

## LESSON LEARNED

- *Outreach is every bit as important as the other elements of stakeholder involvement and acceptance as any other component of a nuclear endeavor.*
- *Educators are the foundation of basic creation, preparation, development, and dissemination of educational concepts and beliefs; therefore, keeping them involved in the process of making nuclear applications commonly known, understood, and accepted is critical.*

With the NPI Focus in mind ...





# What is our target and how do we hit the mark?



“We must open the doors of opportunity. But we must also equip our people to walk through these doors.”

Lyndon Baines Johnson, 37<sup>TH</sup> USA President

## Strategies that are proven to work

- *Work with secondary and primary educators*
- *Brain research reveals that 5th grade is key*
- *Provide site visits and tours*
- *Provide hands-on activities*
- *Provide scientific information in an understandable, applicable format*
- *Provide opportunities, support, and encouragement for educators as consistently and early as possible*
- *Provide for role models and mentors who are what we want to encourage*



## Acceptance (nuclear & abilities)

Engaging Stakeholders for Resources and Common Goals

- Opportunities
- Exploration
- VIPs

Introducing Concepts to Teachers and Students

- Knowledge
- Skills
- Awareness/Understanding

Providing Experiences and Lessons for Application

- Colleges/Universities
- Industry Sites
- Technical/Medical Sites



**K- 12  
Primary and Secondary  
Educational Programs**

**JOBS**

**STUDENTS**

**TEACHERS**

**NPI**

**Science On Saturday**

**Power GRID and BRT**

**WIT**

**POWER SET**

**C-MORE**

**International Teacher Exchange**

**TRA**

**E<sup>3</sup>**

**Conferences, Workshops, Summits, Job  
Fairs**









# Did We Hit the Target?

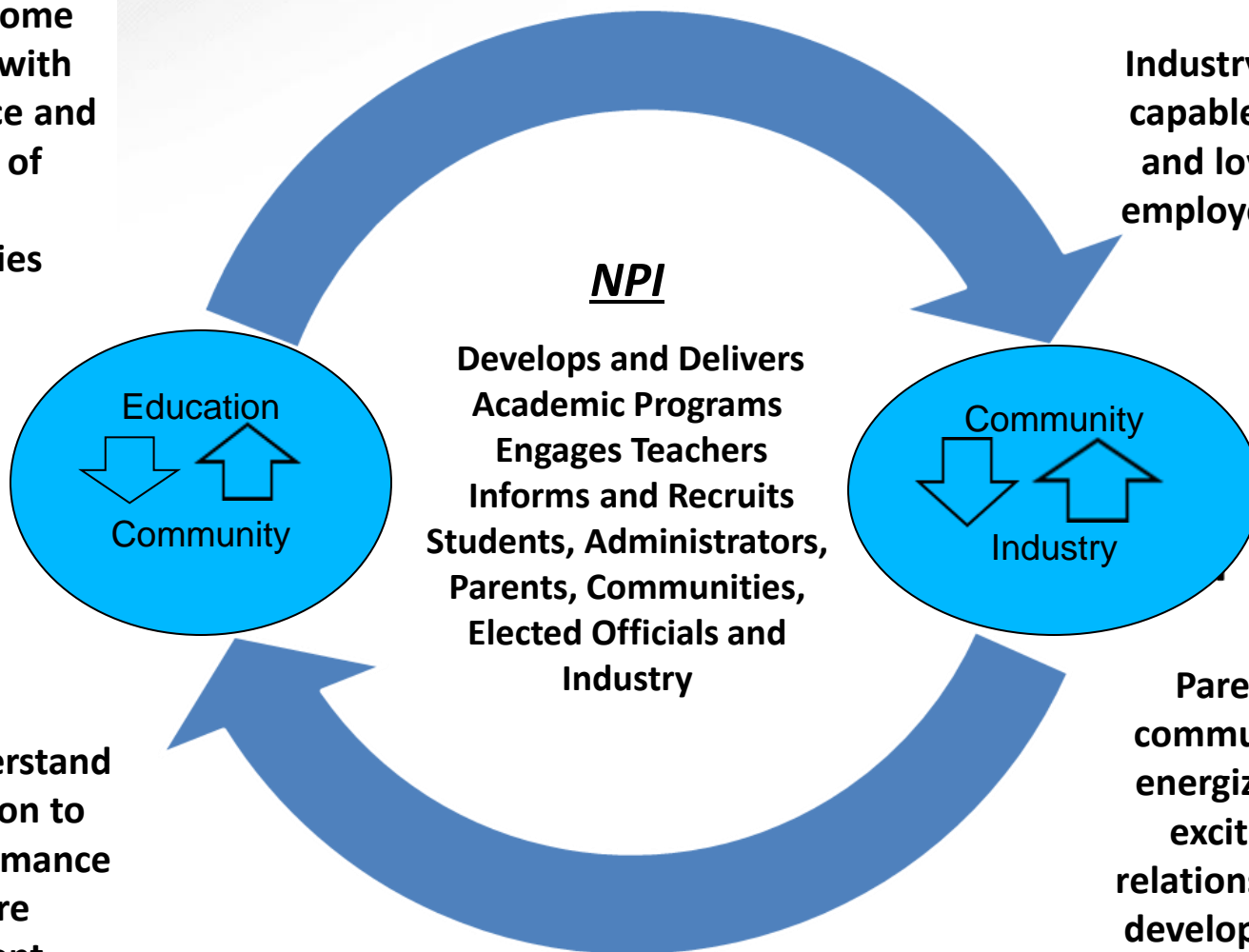


- **During the 2015 -2016 academic year, 1000 K-12 students were engaged**
- **Confidence, empowerment, excitement, and direction**
- **Intensive acceptance and interest – 83% vs. 15%**
  - **Average GPA (grade point average) 3.8**
  - **Experiences, exposure, and opportunities**
    - Internships and scholarships**
    - **Expansion of additional programs**
- **Awareness, understanding, and acceptance of nuclear applications**

## Developing Public Acceptance

Students become empowered with new confidence and knowledge of career opportunities

Industry develops capable, talented and loyal future employees sooner



Students understand the connection to current performance and future employment

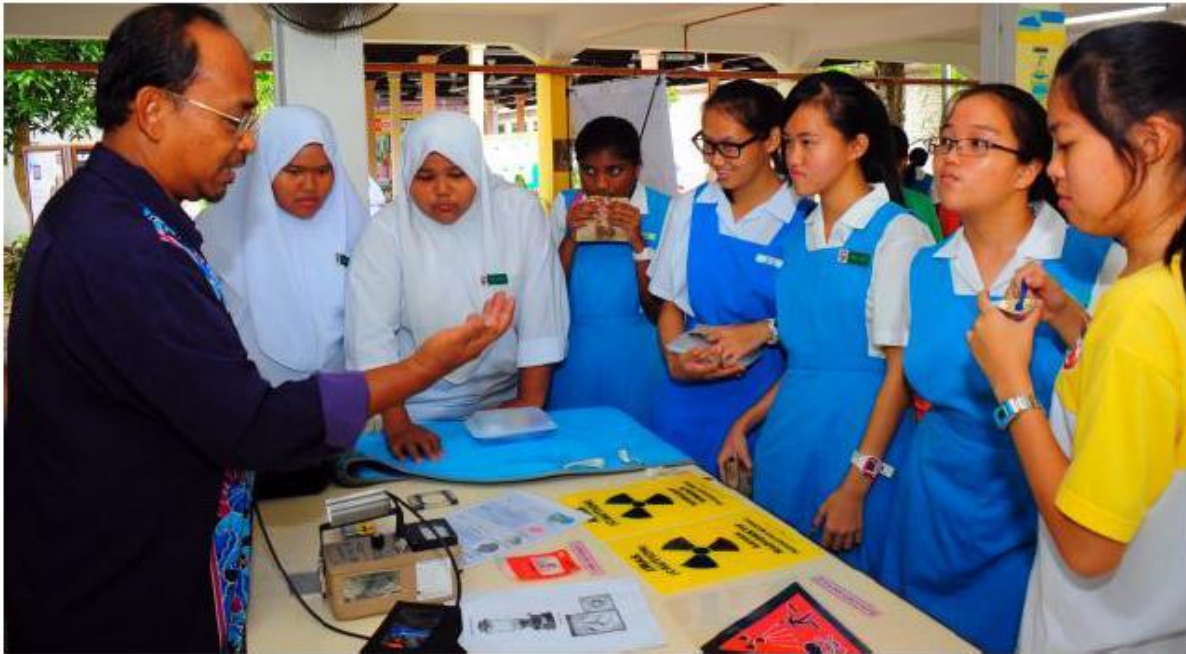
Parents and communities are energized by the exciting new relationships while developing strong support for industry



# Inspiring High School Students to Pursue Careers in Nuclear Science

## IAEA Project Aims to Put Wow Factor in Secondary Science Education

By Brenda Pagannone, Training Specialist, IAEA Department of Nuclear Energy

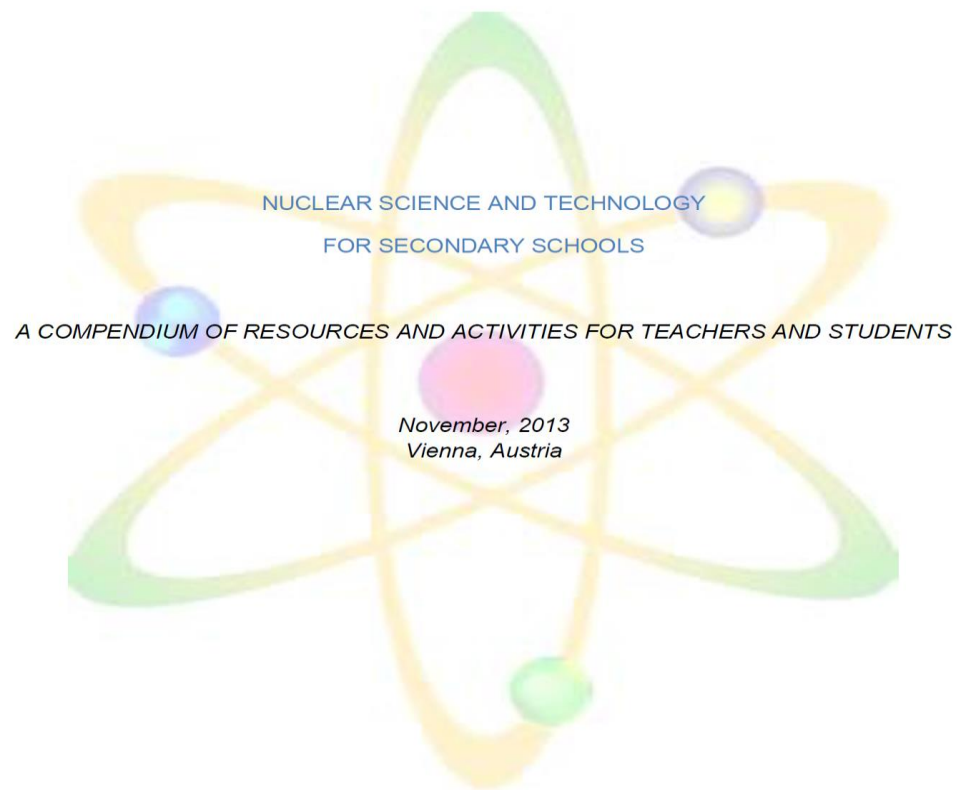


The Compendium aims to encourage high school students to pursue careers in science, technology, engineering and mathematics.

### Background

The idea behind the Compendium first arose in 2012 at a TC project meeting, when Ms. Valerie Segovia, Director of Communication and Outreach at the US Nuclear Power Institute, shared with the IAEA her work in Texas, USA, to encourage young students' interest in STEM, with the objective of meeting the increased demand for science and nuclear-related work demand in her country. Since then, the IAEA has worked with Ms. Segovia and other international experts from Australia, Finland, India, Israel, Japan, Republic of Korea and United Kingdom, to develop the Compendium.

**RAS0065 TC Project: Specialist Advisory Meeting for the development of a portfolio of extra-curricular activities for secondary schools on nuclear science and technology.**





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## POWER SET in the Philippines





# IAEA NPI E<sup>3</sup> Educator Programme

**October 19 – October 29, 2015**

Objective: Educators participating in the E<sup>3</sup> (Enrichment Experiences in Engineering) programme learn how to introduce engineering concepts to their students, increase student awareness of engineering, and encourage students to consider an engineering career. The program's mission is to excite, empower, and educate educators about engineering so they can pass on the knowledge and skills learned in their own research experience to their students.

Expected Outcome: E<sup>3</sup> participants are expected to have experiences that will support their country's action plans which are consistent with the RAS0065 TC Compendium Project. These experiences will involve: current engineering research; integration of math and the sciences methods; enhanced laboratory skills and techniques; reinforced educational research in inquiry, learning styles, and diversity; and increased understanding of student career opportunities in engineering to support the creation of activities for the lessons of nuclear science and technology.



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**IAEA - NPI Educator E<sup>3</sup> Fellowship**

**2015**

 NUCLEAR ENGINEERING  
TEXAS A&M UNIVERSITY

 TEXAS A&M ENGINEERING  
EXPERIMENT STATION

A 3D rendering of a target with a white pen pointing at the bullseye. The target consists of four concentric red rings on a white background, with a small red bullseye in the center. A white pen is positioned above the target, with its tip pointing directly at the bullseye. The pen is angled downwards from the top right.

**Are We Hitting  
The Mark?**





**We Can Do It!**



**Sabrina Garcia**  
**POWER SET**  
**Palacios High School**

Thank you!

Questions?

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