



NPI

NUCLEAR POWER INSTITUTE

***POWER SET:
Empowering Young
Women to Assume
Their Role in Nuclear
Science***

*WIN Global Annual Conference
Vienna, Austria , August 2015*

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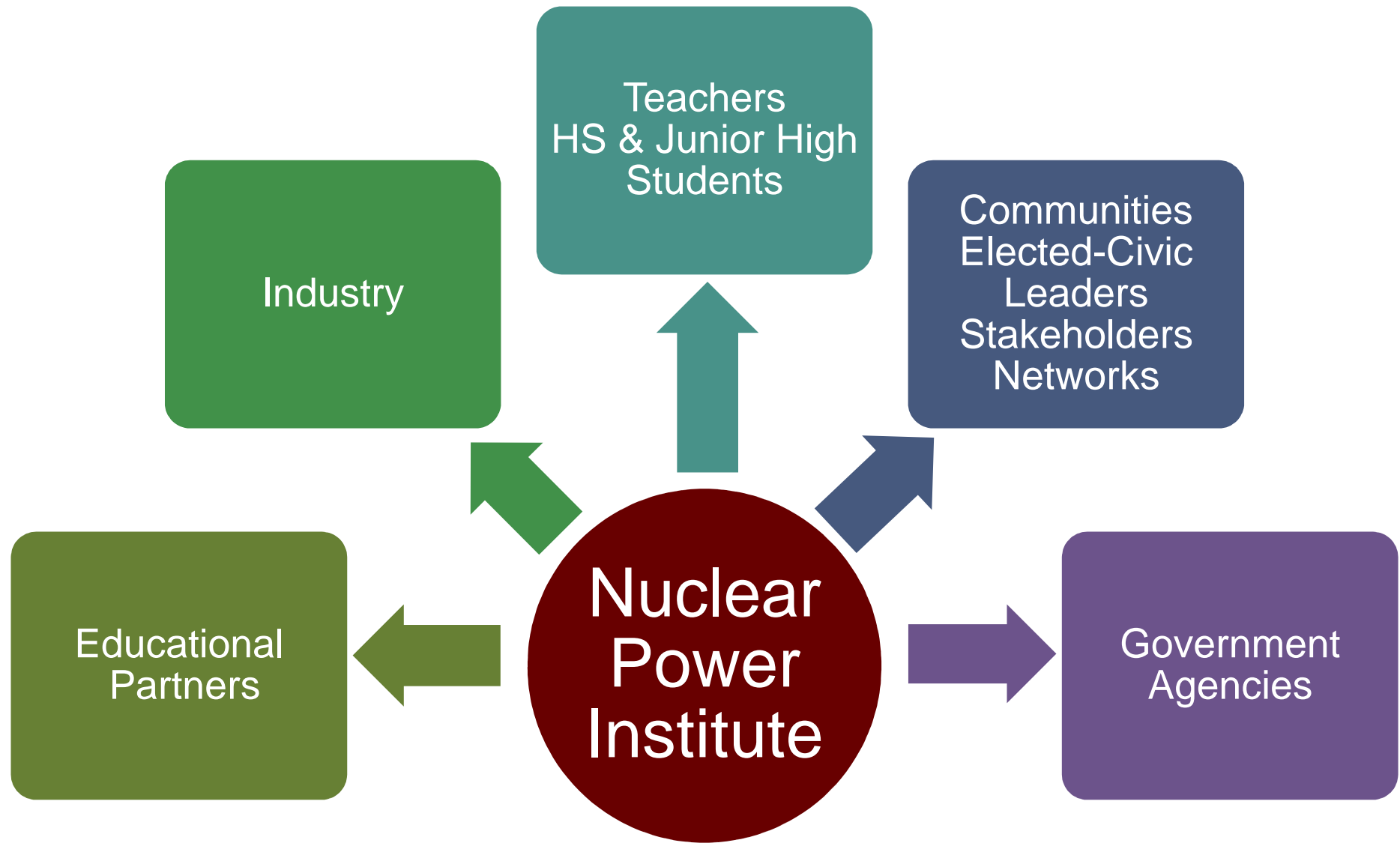


TEXAS A&M
UNIVERSITY®



**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.
- Primary Sponsors
 - State of Texas, industry, international organizations (IAEA), and collaborating countries.



Challenges we face ...

--- Underrepresentation of women ---

- **From more than 3 decades, U.S. women have outnumbered men in college enrollment**
- **58% of college students are women**
- **Only 24% are in a STEM (science, technology, engineering, math) career**
- **Only 13% of engineers are women**
- **Only 15.5% of workforce (STPNOC)**

Challenges we face ...

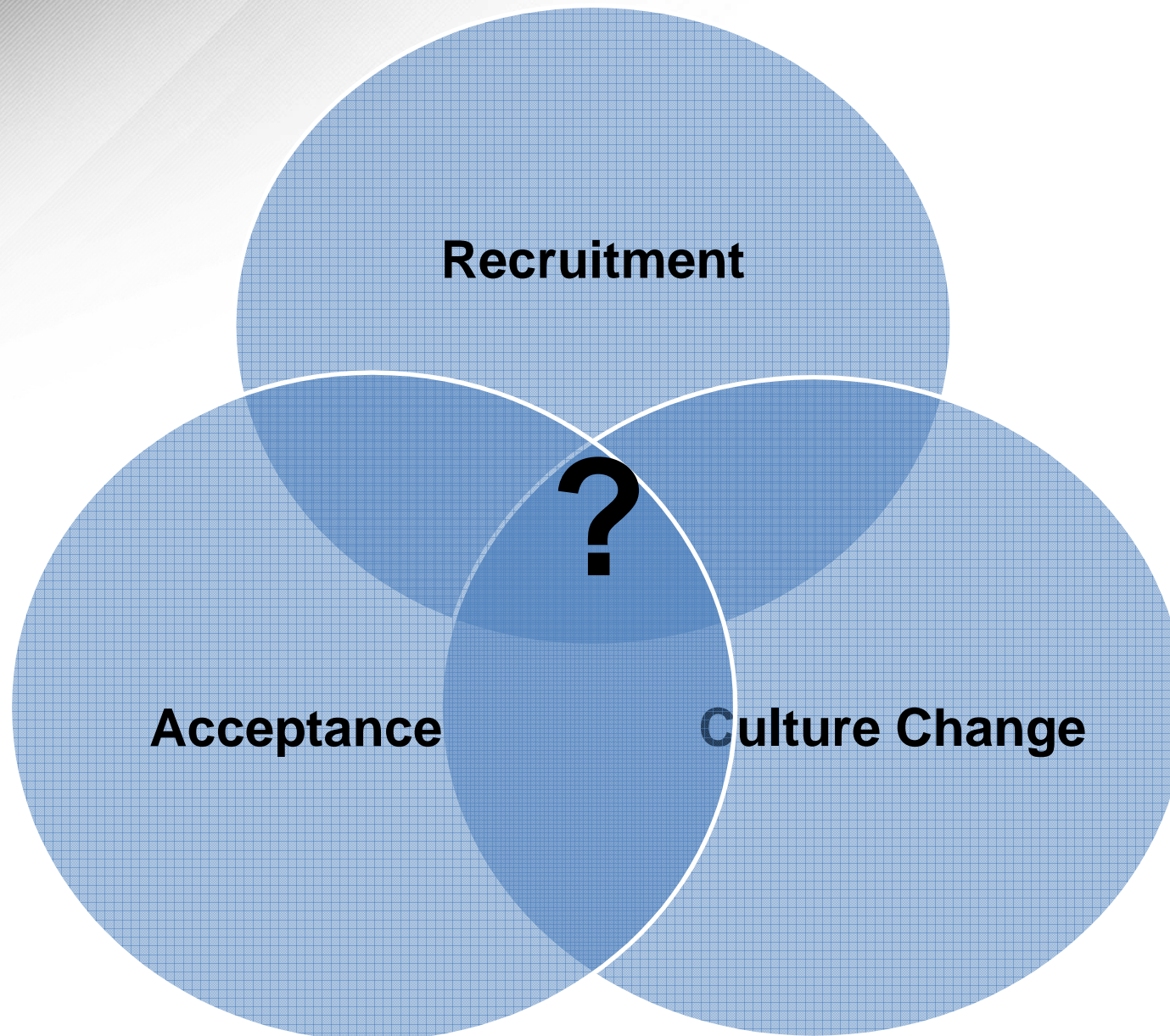
- ***“Leaking Pipe” [is] a metaphor describing the educational conduit “carrying students from secondary school through university and on to a job in STEM” (Blicdenstaff, 2005, p.369).***
- **Only 15% to 18% of college students pursue a STEM degree**
- **Research indicates that STEM stereotypes are accepted by 8th grade.**
- **“The absence of women from STEM education and careers affects more than the women it missed, it is a missed opportunity for those fields.”**

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graph BT; A((Nuclear Power Institute)) --> B[Teachers HS & Junior High Students];
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Teachers
HS & Junior High
Students

Nuclear
Power
Institute

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, 36th U.S. President



EMPOWERING YOUNG People

Open Doors

- Opportunities
- Exploration
- VIPs

Resilience

- Choices
- Agility
- Positivity

Confidence

- Knowledge
- Skills/understanding
- Self-reliance

We can not inspire students if we are not inspiring!



2015 US WIN Conference

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POWER SET

(Powerful Opportunities for Women Eager and Ready for Science, Engineering and Technology)

TARGET

Female students with strong aptitude in STEM

- Trips/Visits: universities, medical facilities, museums, NASA, etc.
- Visits and speaking providing awareness about all nuclear applications (energy, biology, agriculture, & medicine)
- WIN members and other industry representatives mentor
- Internships, scholarship, & professional development opportunities





POWER SET

Among the world's oldest and most treasured gems, pearls represent the ideals of POWER SET: overcoming adversity through hard work, perseverance and tenacity. Each POWER SET members receives a pearl necklace which shows the world her commitment and to the program and its goals.



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Power GRID

(Girls Responding to Industry Demands)

Our Power GRID Mentor Program provides positive high school female student mentors from the POWER SET organization to motivate pre-teen girls to cultivate leadership skills, boost character development and encourage science, technology, engineering and math (STEM) subject acceleration



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WIT

(Workforce Industry Training)

TARGET

Male and female students
with an interest in STEM
(Science, Technology,
Engineering and Math)

- Professional development activities by industry representatives
- WIT members mentor younger students
- scholarship opportunities
- Trips – universities, medical facilities, museums, NASA, etc
- Gaining national and international recognition



Program Goals

- Increase boys' sense of self worth
- Improve boys' perspective toward STEM education
- Help boys develop and define their short-term and long-term goals
- Encourage social awareness through community service projects
- Build positive relationships and support networks with adults and peers



SOS (Science on Saturday)

SOS takes the excitement of STEM from the classroom and into the community to demonstrate and explain to students that science is fun and found everywhere!



➤ Presented by NPI high school teachers and POWER SET and WIT students promoting STEM.

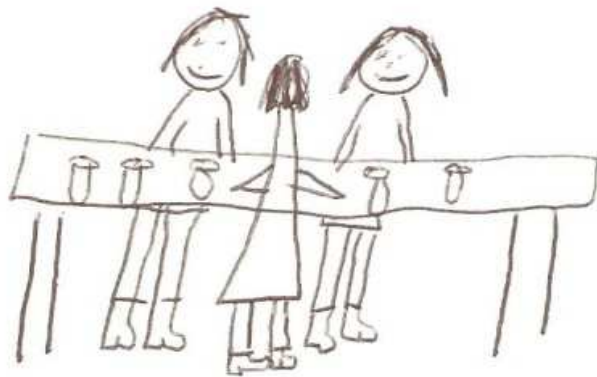


➤ Stimulate scientific inquiry and interest with experiments and demonstrations.

➤ Students from elementary through high school participate in science experiments.

➤ Open to students, teachers, parents, and community members.





Thank you for the Science
fun! I appreciated all of it!
My favorite part was well all of it!
Thank you so much.

Love,
Brooklyn Griffith

Thank you for
the Science fun. My ~~favorite~~
faveret part was I can't
even pick wich wun was
the best theye were all
my favrit thank you
for all the fun.

from: Raelynn

Did We Hit the Target????



- During the 2014 -2015 academic year, 900+ *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**

We Can Do It!



Sabrina Garcia
POWER SET
Palacios High School

Thank you!

Questions?

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www.nuclearpowerinstitute.org