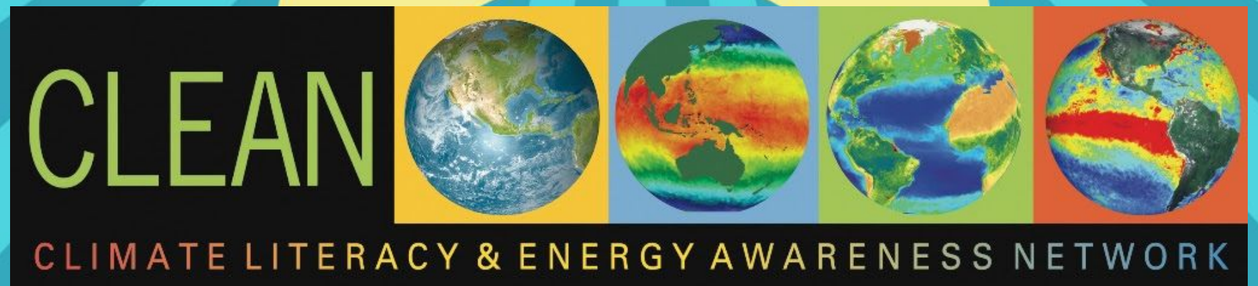
STEM SUPERHEROES

Highlighting Women in Energy

April 6, 2021



Meet Energy Nerds

Erin Twamley

Author & Educator (M.Ed.)

Girl Scouts Overseas STEM Global Facilitator

Prior Education & Workforce Portfolio Manager at DOE-EERE

Joshua Sneideman

Author, Educator & VP of STEM

Prior Albert Einstein Distinguished Educator at DOE-EERE

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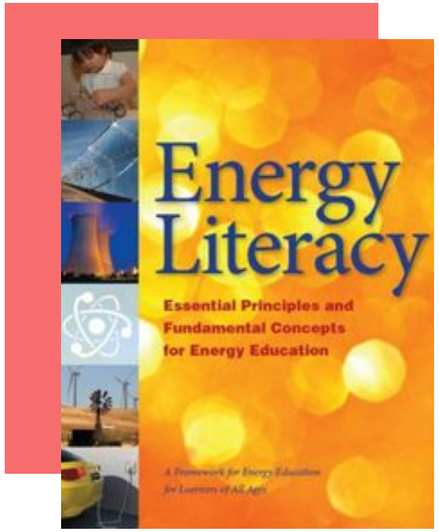
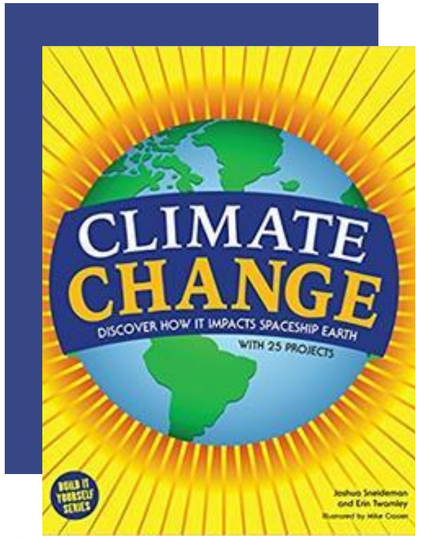
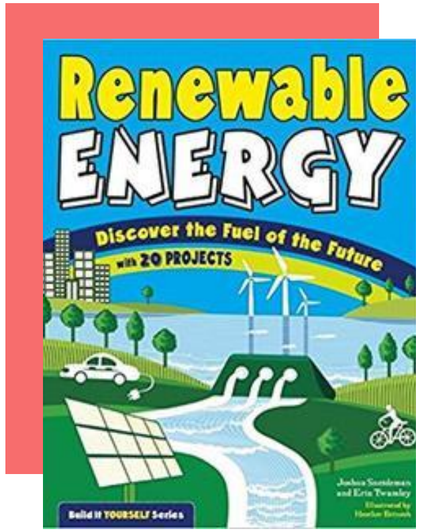
Our Work in Energy

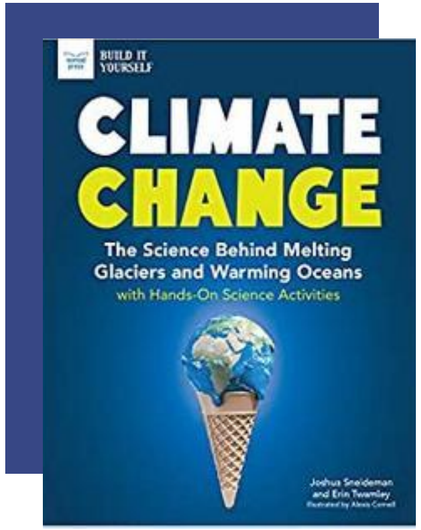


U.S. DEPARTMENT OF ENERGY

Energy Efficiency & Renewable Energy







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The Movement

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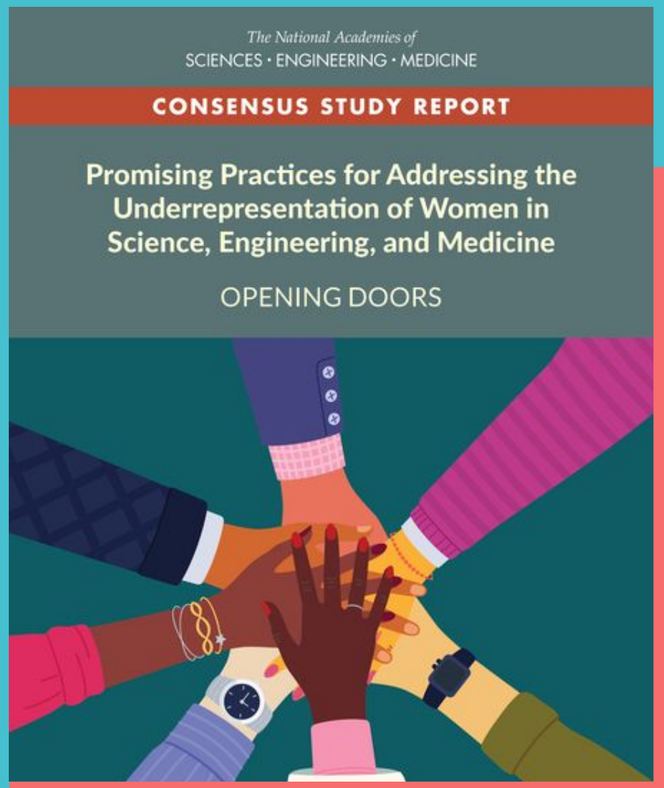
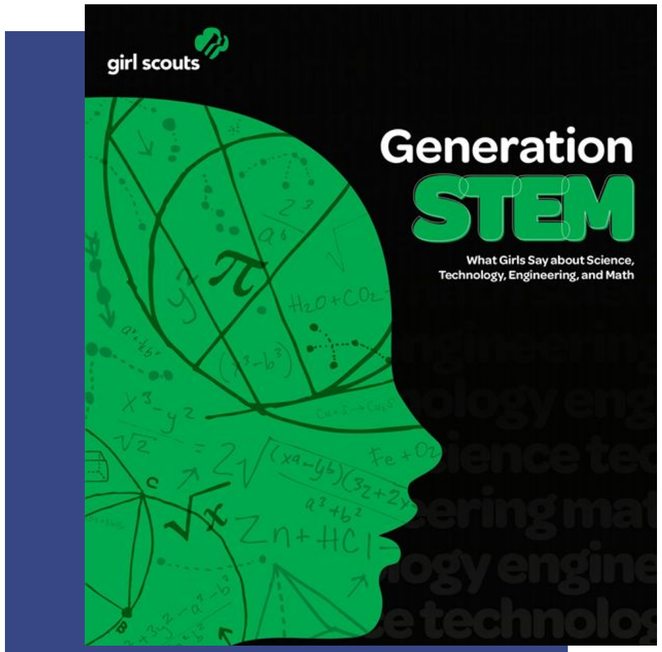
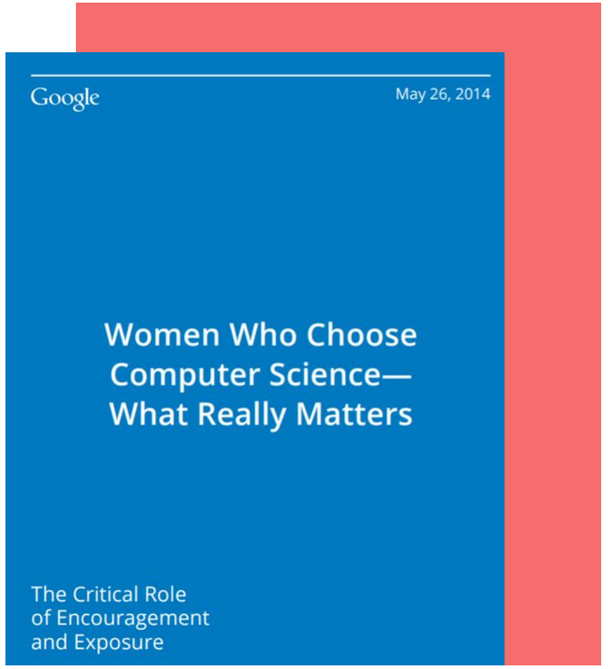
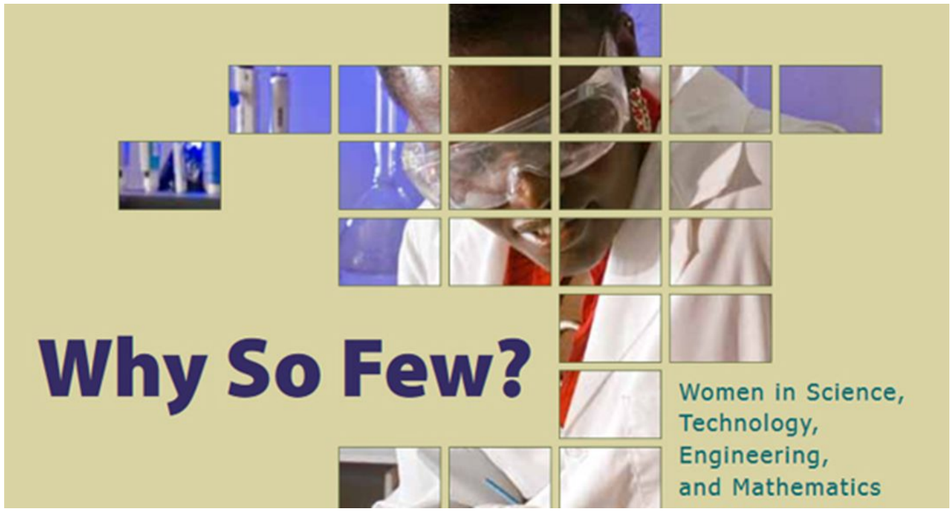
The Data









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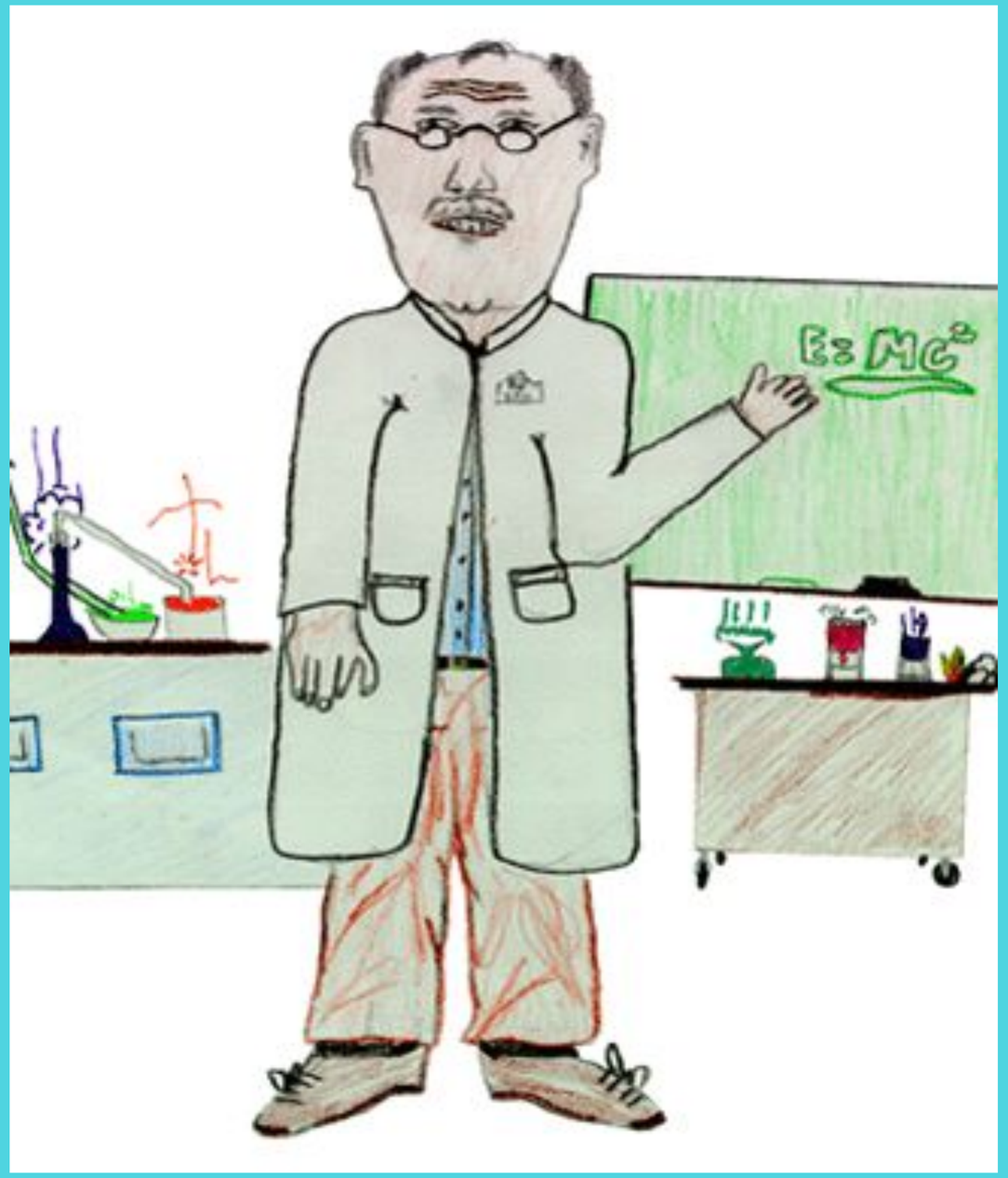

Draw a Scientist Study

7 in 10 kids still draw a scientist as a man!

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Early socialization provides the first departure point in gender disparities in engineering.

(Chanderbhan-Forde et al., 2012).

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...brief exposure to a woman scientist role model enhances female students' identification with and interest in STEM.

(Ramsey et al., 2013; Stout et al., 2011).

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Let’s engage **girls** in energy!

Why Elementary?

ENERGY INTERSECTS ALL OF STEM.

AS EARLY AS **2ND GRADE** KIDS DECIDE WHETHER THEY ENJOY **STEM-BASED SUBJECTS**.

PARENTS AND FAMILIES DON'T KNOW ABOUT THE **DIVERSE RANGE OF ENERGY CAREERS**.

FAMILIES AND READING ARE AMONG THE BIGGEST INFLUENCE ON **YOUTH OUTCOMES**.

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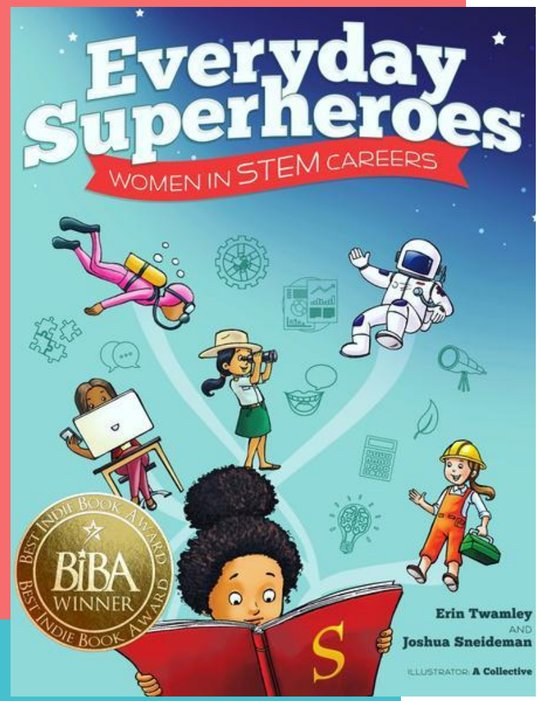
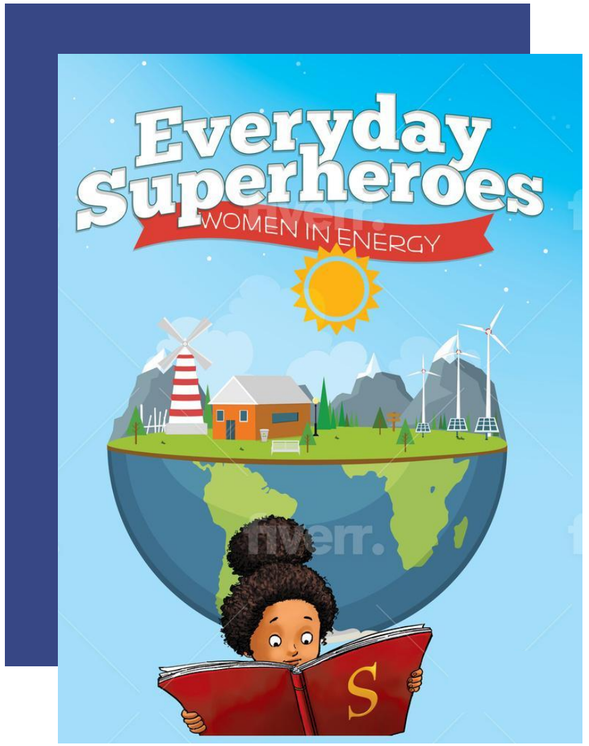
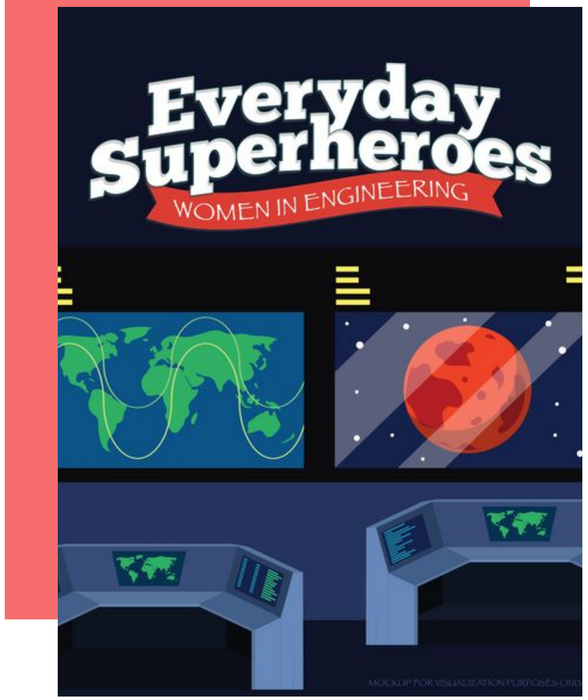
The book series...



2019



2022



2024

STEM SUPERHEROES™

Reviews & Praise

A wonderful text that explores STEM superpowers while sharing how extraordinary women are helping our world thrive through their Science related careers. Highly recommend for grades 3 and up!

Katie Reilley
4th & 5th Grade ELA Teacher

Book Review

The Authors bring yesterday's and today's STEM Superheroes to life alongside a very comprehensive list of many of today's STEM Careers! It belongs in every classroom, on every nightstand, and in every backpack.

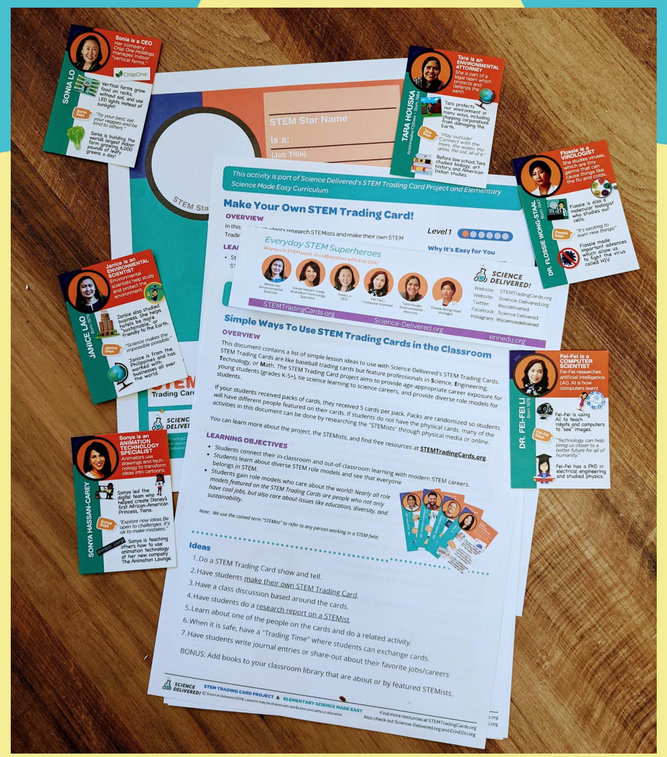
Mary Spruill
Executive Director of NEED Project

1st Grader
NW Florida

Book Review

My favorite job is the environmental lawyer so I can yell on behalf of the trees.

The printables & more



- Printable Classroom Activities
- STEM Trading Cards
- Posters
- Coloring Book
- 3D Building Kits

STEM SUPERHEROES™

Inside the Book

Sharing the

stories, careers, &

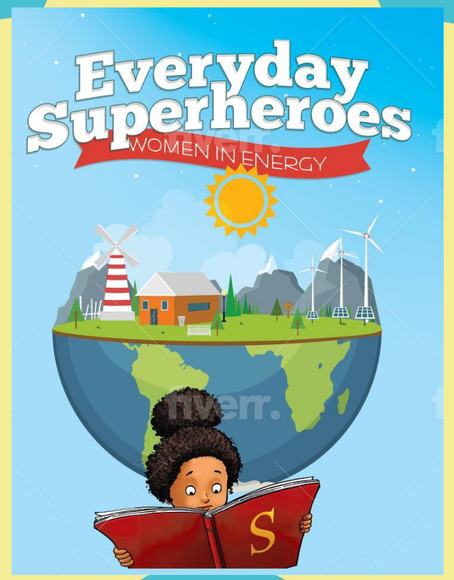
superpowers

of 26 diverse women

powering our planet.

STEM SUPERHEROES™

Book Outline



Foreword: By a Young Energy Superhero

Who Are Energy Superheroes?
What Are STEM Superpowers?
Where Can We Find Energy Superheroes?
How Do You Become an Energy Superhero?

Powered By Sponsors Page(s)
Energizing Links and Resources

STEM SUPERHEROES™

Award Winning Format

Recharging a Whole City

ELECTRICAL ENGINEER

Where does the electricity that turns on the lights or powers the TV in your home come from? Most people never think about where their electricity comes from! In fact, most homes use electricity from a mixture of energy sources.

Electrical engineers work on the generation, transmission, and distribution of electricity. Electricity can be generated from a mixture of energy sources: burning fossil fuels, nuclear fission (splitting an atom), and renewable sources such as solar, geothermal, water, and wind energy. Power companies distribute electricity to our homes, businesses, and communities through a grid of power lines. In this complicated system, electrical engineers make sure the lights stay on! They keep the power system working efficiently. Electrical engineers are awesome at using their problem-solving skills to get power to remote locations, such as islands, or to increase the use of renewable energy.

The mixture of energy supplied to a city or town is called its **power profile**. Think about your city or town. How much energy comes from renewable or coal? What are other sources of energy? What choices do you think electrical engineers in your city or town had to make?

SUPERHERO

Dr. Vera Silva

Dr. Vera Silva is helping to bring renewable power to the European Union (EU) grid system. In school she studied electrical engineering and spent many years doing research. Dr. Silva now leads a team of more than 3,600 engineers who work in more than seventeen countries at GE Grid Solutions. This company provides equipment and solutions to help with the electricity transmission and distribution across the globe. One of the goals of the EU is to increase the amount of electricity produced by renewable energy to 50 percent by 2030. Dr. Silva uses her superpowers of problem solving, data analysis, and communication to understand and propose ways of reaching this goal. Dr. Silva has written three books, many academic papers and often speaks at industry and academic conferences to promote the use of renewable energy sources.

Sample Careers & Superheroes

Driller

Energy Educator

Geologist

Installer

Lineworker

Meteorologist

Nuclear Engineer

Technician

Nominees for
Energy Superheroes

Rani Puranik, CFO

Dr. Kimberly Miner, Climate Scientist

Dr. J'ia Hart, Nuclear Engineer

Should we be specific or group jobs like **installer** or **technicians?**

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Do you have an **Energy Superhero** to **nominate?**

What **careers** to **include or highlight?**

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Do you know a **company** who **would want to sponsor?**

Powered By You

- **Nominate an Energy Superhero**
  - https://forms.gle/91jbpkJajNdeDGAH9
- Collaborate on the book:
  - Share career insights
  - Participate in focus group(s)
  - Advanced reviewer of book
    - https://forms.gle/UUmfb65YYjPcJS747
- Be a nonprofit partner
- Sponsor the book or printables
- Be an energy education partner
- Purchase the book for kids

STEM SUPERHEROES™

Energy Ambassador

Share the Effort

Newsletter

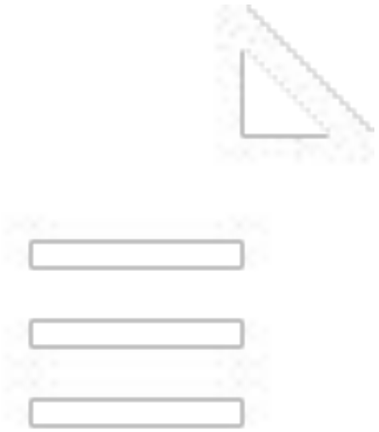
Blog

Podcast

Social Media

Conferences

Events



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Are you ready to
inspire the next
generation of
energy superheroes?

Thank you!

www.stemsuperheroes.com

STEM Superhero

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