

### GOALS

- Link researchers, educators, consumers, and students.
- Develop interactive lessons and activities.
- Create interest in STEM disciplines and careers.
- Educate for consumer acceptance and use of smart grid technologies.
- Encourage further learning.

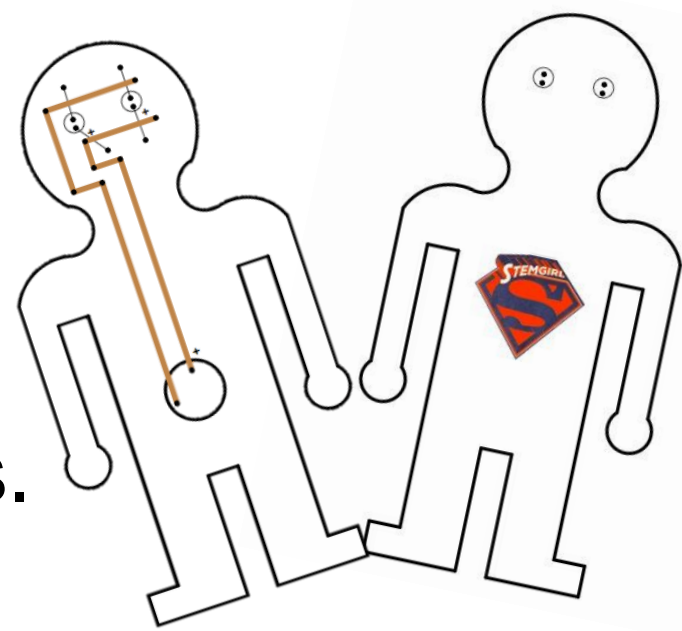
### FUNDAMENTAL QUESTIONS/CHALLENGES

- Connect with pre-college students and teachers.
- Communicate visions for future power system configurations.
- Illustrate challenges, trade-offs, and decisions that go into power system design and operation.
- Participate in community events and provide energy education experiences to empower an informed public.



### EDUCATION PLAN

- Create interactive lessons:
  - Hands-on.
  - Web-based.
  - Accessible on mobile devices.
- Provide print materials and kits:
  - Lesson plans for teachers.
  - Resource kits for physical demonstrations.
- Connect with other national curriculum endeavors and informal education providers.
  - Project Lead the Way.
  - KidWind.
  - National 4-H SET.
  - Questar-Bridges Project with MESO (Mesoscale Environmental Simulations and Operations, Inc.).
  - Southern Regional Education Board Advanced Career Energy and Power curriculum.



### DISSEMINATION ACTIVITIES



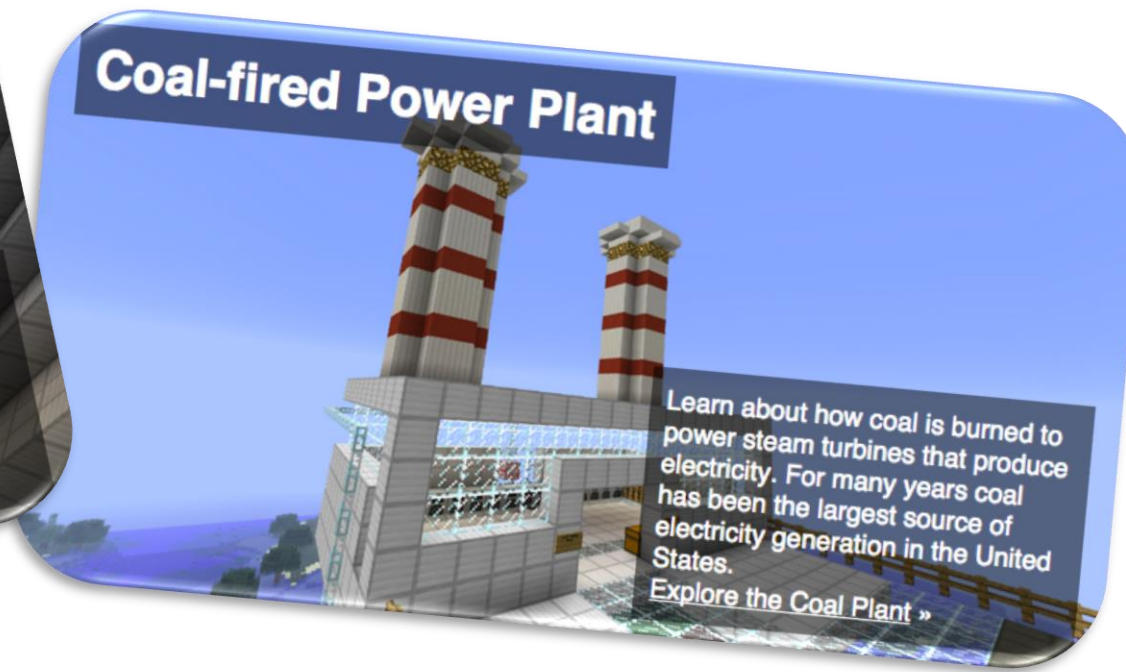
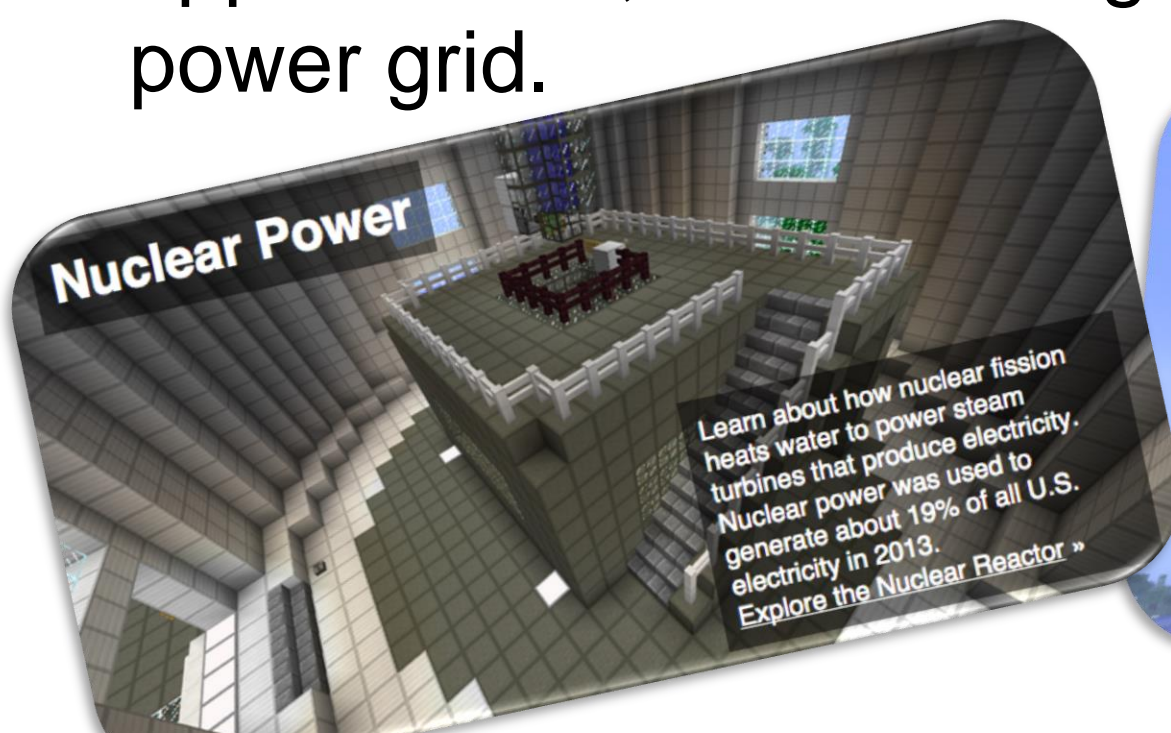
- Broad web-based distribution and links.
- Partnerships with teachers and schools.
- Presentations at conferences for teachers and for industry representatives.
- Community and campus events.
- Energy education dissemination grant from Caterpillar Foundation.

- USA Science and Engineering Festival.
- UIUC GAMES Camp and GEMS Camp.



### BROADER IMPACT

- Tools for informal learning.
- TCIPG Minecraft Power World.
- Lesson materials for students and teachers.
- Communicating to the public the importance, opportunities, and challenges of a secure, modern power grid.



### FUTURE EFFORTS

- Use virtual and physical exploratory spaces to expand dissemination of educational resources on the science of electricity and the smart grid.
- Create educational resources that relate the physical electrical infrastructure and the secure cyber infrastructure.
- Develop a multi-era power grid strategy game for iPad and iPhone.

