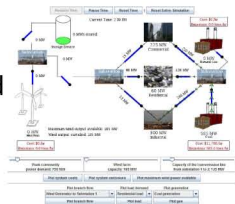


## Goals

- Link researchers, educators, consumers, and students.
- Develop interactive lessons and activities.
- Create interest in STEM disciplines and careers.
- Illustrate issues necessary for consumer acceptance and use of smart grid technologies.
- Create consumer information modules and consumer guidelines for distributed generation and energy management systems.
- Define best and worst workplace practices and make these available to the appropriate audiences.



## Fundamental Challenges

- Connect with middle and high school students and teachers.
- Illustrate challenges, trade-offs, and decisions that go into power system design and operation.



- Increase consumer knowledge and acceptance of smart grid technologies.
- Educate for a cyber secure workplace.

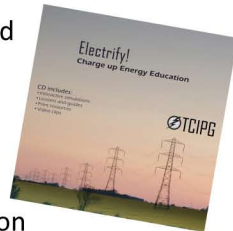
## Education Plan

- Create interactive lessons:
  - Web-based distribution ([tcipg.mste.illinois.edu](http://tcipg.mste.illinois.edu)).
  - Links from other sites.
  - Handheld touch tablets.
  - Hands-on activities.
- Provide print materials:
  - Lesson plans for teachers.
  - Museum posters and activities.
  - Smart grid picture resource cards.
- Connect with other national curriculum endeavors and informal education providers.
  - Project Lead the Way.
  - KidWind.
  - National 4-H SET.



## Dissemination Activities

- Broad Web-based distribution and links.
- Partnerships with teachers and schools.
- Presentations at conferences, exhibitions, and symposiums.
- ASEE publications.
- Energy education dissemination grants from Caterpillar Foundation and Northrop Grumman.
- IEEE Science Kits for Libraries Grant.



## Broader Impact

- New education tools for informal learning.
- Lesson materials for students and teachers.
- Communicating to the public the importance and challenges of a secure, modern power grid.
- Cyber secure workplace education.



## 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.
- Partner with Bill Hammack [www.engineergy.com](http://www.engineergy.com)

