A proposal for the development of Energy Systems Education Center (ESEC) at PSH

The Energy Systems Education Center (ESEC) aims to be a comprehensive educational resource base on energy sources, transformations and uses in consonance with the environment. It is multidisciplinary in its approach, strategic in its growth and will aspire to be dynamic in its response to trends in energy issues in south central PA.

The ESEC will provide to a diverse audience education on energy and the environment using both traditional and non-traditional modes. Plans for the center includes the following:

1. Energy systems - traditional and virtual laboratory facilities (accessible to community)
2. Development of educational digital games on energy themes
3. Online energy awareness resource (database interfaces, interactive environment, etc)
4. Online format college level course (Resident instruction)
5. Multidisciplinary textbook on energy and the environment
6. Course development - multidisciplinary, technical approach for engineering majors
7. Course development – multidisciplinary, non-technical approach for non-engineers
8. Continuing education courses (online and traditional)
9. Guest speaker series and seminars

Team members:
- Peter Idowu, Ph.D., PE
- Issam Abu-Mahfouz, Ph.D., PE
- Richard Ciocci, Ph.D., PE
Conceptual Model of the Energy Systems Education Center

Conventional energy systems
Electric power
Alternative energy systems
Energy efficiency
Energy storage
Energy and the environmental
Energy in transportation
Hybrid electric vehicles
Distributed generation
Nuclear energy
Environmental impacts of energy

Online education resources
Educational digital games
Virtual laboratories
Traditional resident instruction

Energy databases and interface
Community access to ESEC resources
Virtual interfaces to energy laboratories