



THE UNITED STATES' EXPERIENCE

**TITLE:**  
**ENERGY PRODUCTION AND INFRASTRUCTURE CENTER (EPIC)**

**GENERAL INFORMATION**

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**Country:** U.S.

**Coordinating Institution:** University of North Carolina at Charlotte

**Duration of the experience:** October 2012-Present

**Webpage:** <https://epic.uncc.edu/>



**1) Objectives**

The Energy Production and Infrastructure Center at UNC Charlotte is a collaborative, multidisciplinary effort that is uniting the academic and research expertise of the university with the great wealth of energy engineering talent in the Charlotte, North Carolina region. Focused on growth and advancement in the energy industry, EPIC is integral to and supported by numerous companies in the Charlotte energy hub.

**2) Relevance**

EPIC prepares the future workforce, enhances the current technical workforce, develops and advances technology, and facilitates strategic industry-university collaboration for the global energy industry, while supporting the Carolinas' economic and energy security development.

### **3) Concrete activities and actions**

Through sponsored research, scholarships, internships, and various technical services, EPIC has aligned itself with over fifty energy related companies nationally and internationally. It also partners with two business incubators to bring new technology to market. The Advisory Board and Implementation Team funnel two-way communication between faculty and industry creating enhanced curricula and research projects. Over 40 Senior Design Projects each semester are energy-related. EPIC partners with other universities to promote collaboration and resource sharing.

### **4) Achievements and results**

Interest in Energy education, issues, careers, and research is exploding. While many factors contribute to this, EPIC has positioned itself to be a regional, national, and international collaborator for the energy industry. Locally, EPIC's success led directly to the decision to site an Energy-Focused Early College High School on campus. The first 100 ninth graders report to school in August of 2014.

Over 100 K-12 STEM educators from across North Carolina have visited EPIC and been provided award-winning energy-education materials. Growth in engineering majors has continued.

### **5) Sustainability**

As relationships with other universities, industry partners, policy groups, and students mature, new ones emerge. New businesses are attracted to the area, K-12 students begin thinking about STEM careers, research leads to innovation and solutions. This evolution along with the urgent need for clean, affordable and reliable energy will sustain the program for many years to come.

### **6) Lessons learned**

A major challenge in designing a center such as EPIC is the lab space design. It takes careful planning and a good deal of luck to predict which technologies should be the highest priority. Flexibility in space design, equipment access, and funding are crucial to success. The strong support from industry, state government, and university administration has enabled EPIC to quickly move from the drawing board to reality. The importance of this support cannot be over emphasized.

7) Capacity for the exchange of this experience

Cooperation modality	Cooperation modalities the institution can provide to others	The institution may be able to provide this cooperation to others by
Information Sharing	x	August 2014-15
Conference Calls	x	August 2014-15
Videoconferences	x	August 2014-15
Workshops	x	August 2014-15
Technical and Experts Visits	X	August 2014-15

8) Author of this story

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9) Key persons involved in the design, implementation, and evaluation of the experience

9 a.

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