Florida’s Energy Career Cluster

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The Challenge

Hurricane Frances
September 5, 2004
Hurricane Ivan
September 16, 2004
Hurricane Charley
August 13, 2004
Hurricane Jeanne
September 25, 2004
Hurricane Ivan
September 16, 2004
Early Priorities

Creating the Next Generation Standards for Career & Technical Education Programs is Important to Florida’s…

• Economic Development
  – #1 issue identified by business/industry seeking to relocate or expand their business in Florida:
    Is the skilled workforce or “talent” available?
  – Ensuring that Florida’s career and technical education program standards are aligned with the needs of business and industry is a major component

• Citizens
  – Seeking educational opportunities that will prepare them for high-skill, high-wage, high-demand occupations

Source: “Creating the Next Generation Standards for Career & Technical Education”
Florida Department of Education, Department of Workforce Education
In order to ensure that Florida has the skilled workforce to “grow” the economy:

- Identify occupations important to Florida’s economic development
- Create the educational programs that prepare individuals for employment in the occupation
- Next Generation Standards
- Deliver the educational programs
- School Districts, Community Colleges & other providers
- Skilled Workforce

### Energy Occupations of Concern

- Power plant operators
- Line installers and repairers
- Maintenance and repair workers
- Electricians
- Plumbers, pipefitters and steamfitters
- Engineers & Engineering technicians
Examples of Green Jobs

- Meter Technician Trainee/Energy Auditor
- Meter Technician/Energy Analyst
- Engineer I & II
- Conservation Coordinator
- Demand Side Management Program Manager
- Manager, Environmental
- Smart Grid Technicians
Pipeline Development Initiatives
Middle School Awareness
Secondary Career Academies
Employ Florida Banner Center for Energy
Florida Tech Centers, Community Colleges, State Colleges and University Partnerships

Where Do Energy Careers Fit?

Career Clusters
A grouping of occupations and broad industries based on commonalities. The sixteen career clusters provide an organizing tool for schools, small learning communities, academies and magnet schools.

Clusters
- Agriculture, Food and Natural Resources
  - Production, processing, marketing, distribution, financing & development of agricultural commodities including natural resources such as coal, natural gas and renewables
- Architecture and Construction
  - Designing, planning, managing, building and maintaining the built environment
- Science, Technology, Engineering and Mathematics
  - Planning, managing, and providing technical services
- Engineering and Technology
  - Electrical Engineer
  - Power Systems Engineer
  - Mechanical Engineer
  - Nuclear Engineer
- Science and Math
  - Nuclear Chemist
  - Nuclear Technician

Pathways
- Power, Structural and Technical Systems
  - Engineering Specialist
  - Engineering Technologist
  - Technician
- Process Development
  - Electrical and Electronics Technician
  - Engineering and Related Technician
  - Power Generator Operator
- Maintenance, Installation & Repair
  - Boilermaker
  - Pipefitter
  - Lineworker
  - Electrical & Power Transmission Technician
- Manufacturing Production
  - Process Development
  - Engineering Technician
  - Nuclear Technician
  - Power Generator Operator
Role of the Energy Working Group

- **Overall Goal**
  - To ensure that the occupations included in the specific career cluster are aligned with the needs of Florida’s business and industry

- **Specific Tasks include**
  - Identify the energy occupations that are critical to Florida’s economic development
  - Develop a 3-year program of work to ensure career & technical education occupational standards are relevant
  - Determine/approve
    - Strategies for standards development/revision
    - Timeline
    - Participants

Manage the process for the specific career cluster
Energy Industry Competency Model

Florida DOE Approved Energy Curriculum Frameworks

- Five new frameworks:
  - Energy Technician
  - Energy Generation Technician
  - Power Distribution Technician
  - Solar Energy Technology
  - Turbine Generator Maintenance, Inspection and Repair

- First two courses in most frameworks:
  - Energy Foundations (Energy Industry Fundamentals)
  - Introduction to Alternative Energy

Secondary and PSAV programs
Questions?

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