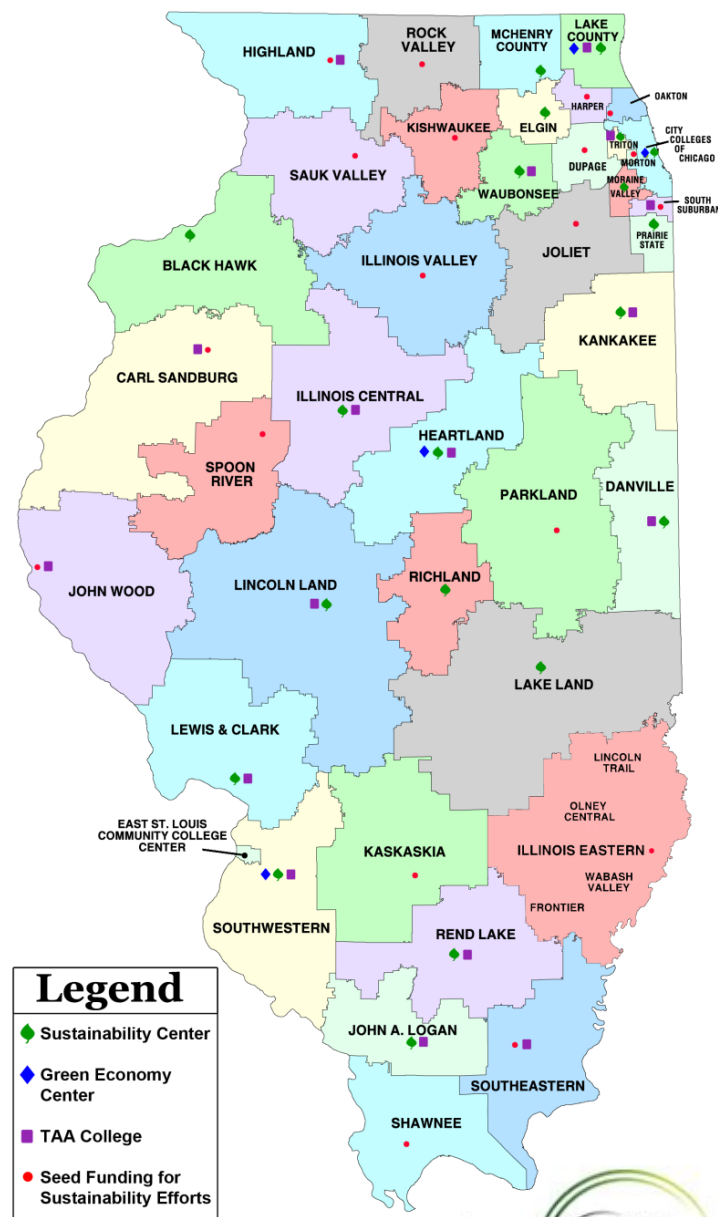


Will Smart Grid Mean New Jobs in Illinois?

*Illinois Community Colleges
and Industry Partners
Advancing the Work Force Conversation*

Illinois Green Economy Network

- President-led consortium of all 48 Illinois community colleges.
- Provides platform for collaboration to identify, establish, share best practices, and promote sustainability initiatives.
- IGEN builds cooperative efforts among community college faculty, staff and students and our community partners to catalyze sustainability implementation and green economic growth throughout the state.



Driving Green Economic Development in Illinois

IGEN's cooperative approach leverages the power of a sustainability network with the deep community connections of individual colleges and the innovative strength of businesses and industry to:

- *Expand deployment of clean energy technologies*
- *Increase employment opportunities*
- *Foster community engagement*
- *Improve human and environmental health*

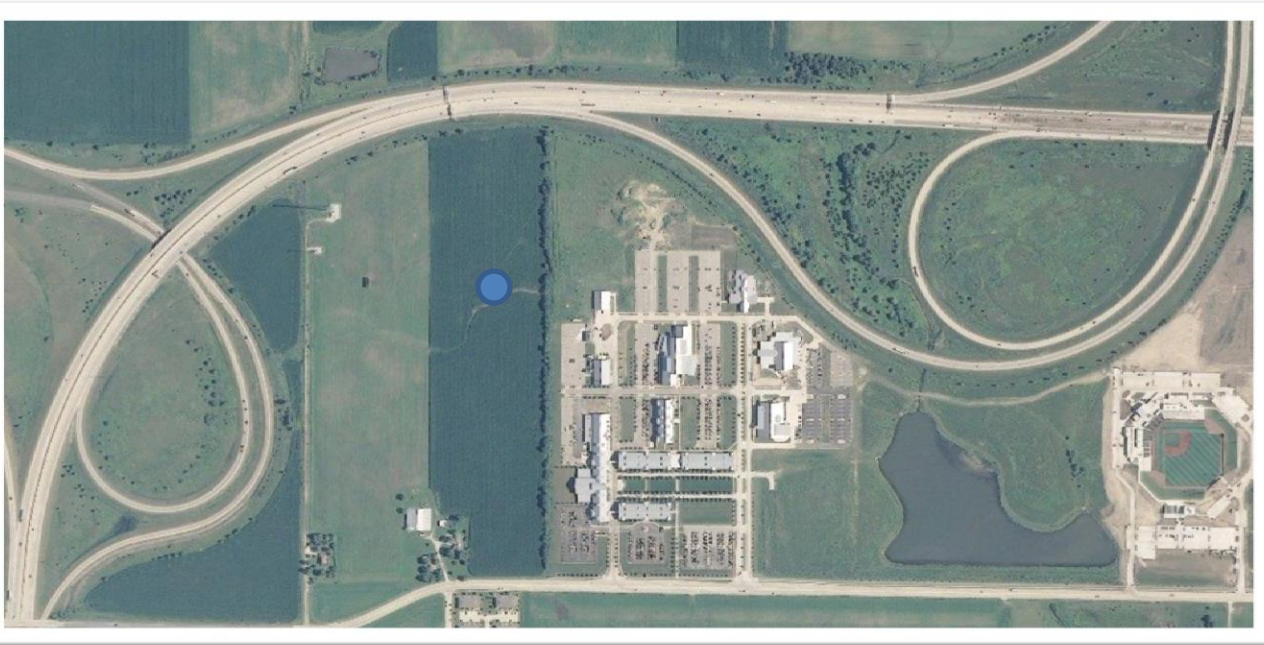


Insert map of new RE installs across state

Heartland Community College

June 2012

1.65 MW Wind Turbine – Vestas 8.2



Smart Grid Campus at Lewis & Clark




LEWIS & CLARK
 COMMUNITY COLLEGE

AEPC
 ALTERNATIVE ENERGY PRODUCTION CENTER


 2013.01.22

Lake Land College

➤ Goals:

- ✓ Entire campus can be taken off grid
- ✓ Grid positive

➤ How?

- ✓ Campus diesel
- ✓ Geothermal
- ✓ 20kW tracking PV
- ✓ One 10 kW turbine
- ✓ Two 100 kW turbines
- ✓ Net Zero Energy Bldg



Lake Land College

➤ Existing Curriculum

- ✓ Home automation
- ✓ PV
- ✓ Wind

➤ Planned Curriculum

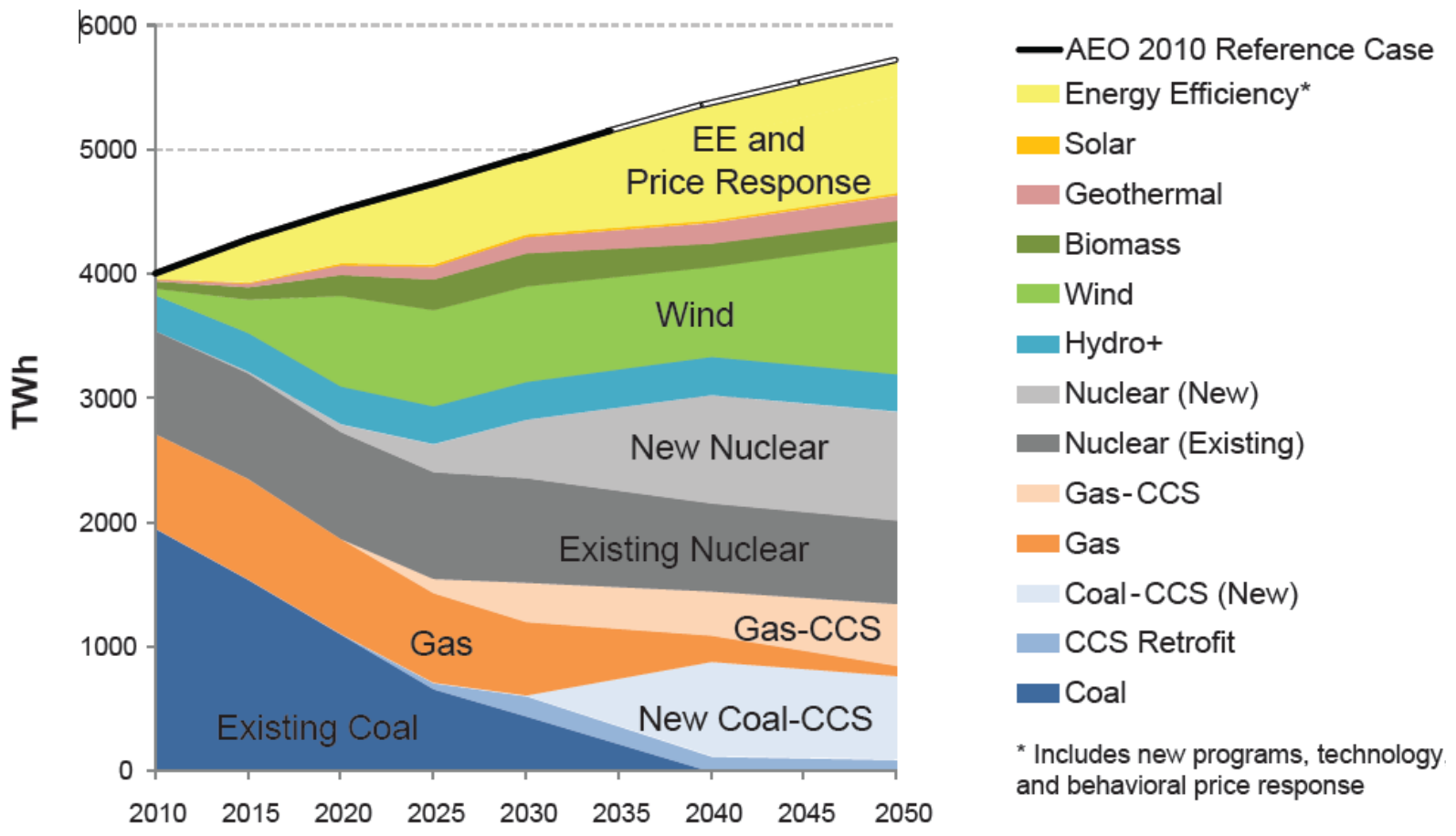
- ✓ Building automation
- ✓ Smart Grid



Smart Grid Certificate at Lewis & Clark



Why is Energy a Priority for Illinois Community Colleges?



Preliminary Insights from EPRI's Regional Model." August 2, 2010.

Why is Smart Grid a Priority for Illinois Community Colleges?

- Illinois Smart Grid Legislation
 - Campuses as test/demonstration facilities for business scale application
- Illinois community colleges collectively spend over \$50M annually for electricity
 - Preventative action now to reduce overall energy usage will be less expensive than corrective action later
- RE and EV Interface
- Opportunities for training new and incumbent workers
 - Training on Smart Grid
 - Community Education
 - Sustainability Centers, dashboard interface, smart appliances
- 48 campuses in Illinois educate over 1 million people annually

Illinois Green Career Pathways Consortium

\$19.4M FY12-FY14 Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant from the US Department of Labor

- IGEN is one of 32 grantees nationwide
- 17 colleges in IGEN consortium
- Create and deliver more than 30 online-hybrid green job degree or certificate programs
- Collaboration with business and industry partners, universities and the Illinois Community College Board

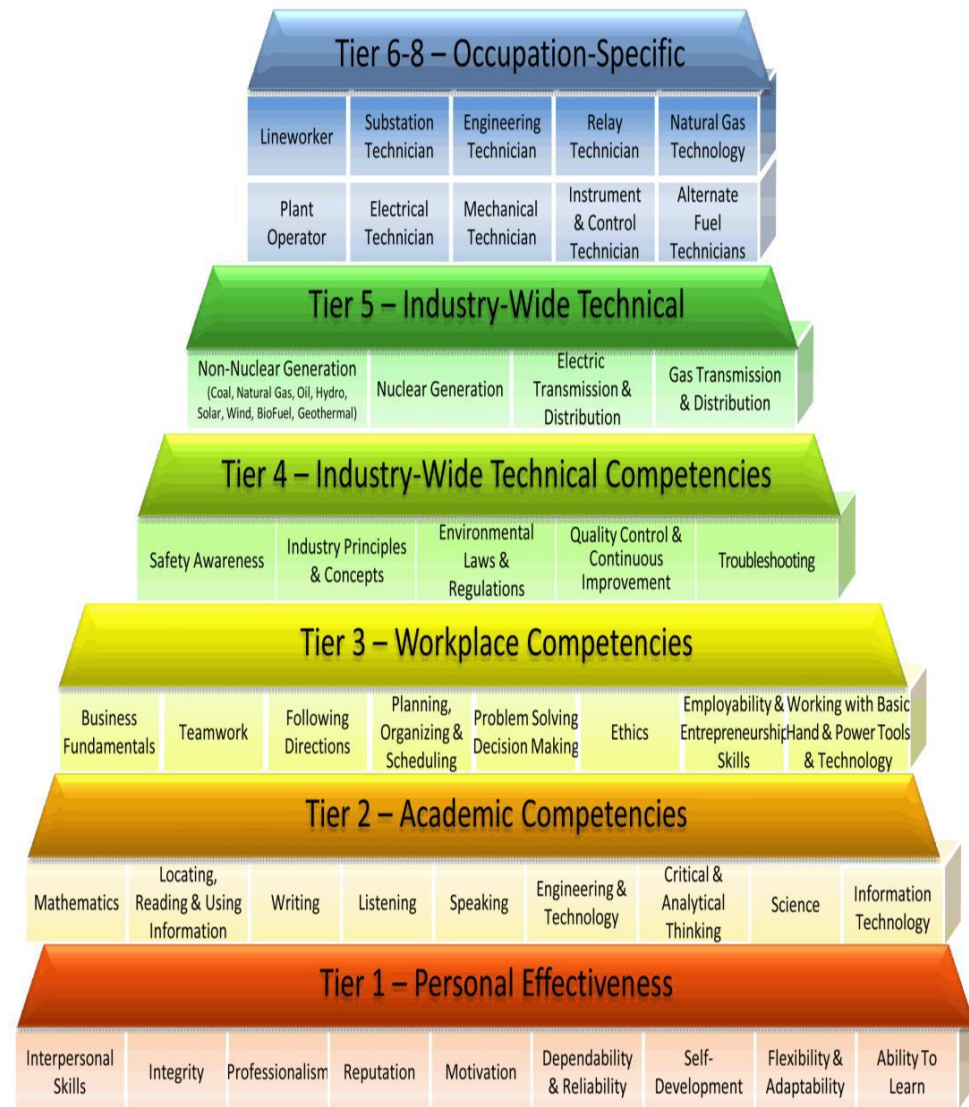


IGEN Smart Grid Initiatives

- **DoL TAACCCT Grant**
 - ❖ Smart Grid Certificate
 - ❖ Smart Grid Classroom @ Lewis & Clark and Lake Land
- **IGEN Smart Grid Working Group**
- **Certificate and Degree Programs**
- **Community Education**
- **DCEO Renewable Energy Development Grant**
 - **RE installs**
 - **SG Summits**
 - **SG Classrooms**
 - **Consumer Education platform**

Same competencies
as before smart grid

Needed training for
new technologies
and procedures



Workforce Training Projects



http://www.smartgrid.gov/recovery_act/overview/workforce_training

Source: Gil Bindewald— US DOE, Presentation at IEEE PES Innovative Smart Grid Technology Conference, February, 2013



U.S. Power and Energy Engineering
Workforce Collaborative

**Preparing the U.S. Foundation for
Future Electric Energy Systems:
A Strong Power and Energy
Engineering Workforce**



Prepared by the Management Steering Committee
of the U.S. Power and Energy Engineering
Workforce Collaborative

Endorsed by the Collaborative's Executive Council

April 2009

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