

# Sustainability and the “Renewable” Economy at Illinois Community Colleges

Dana Wynn

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CTAE: Stronger Together

# Sustainability

## Agenda



**Dana Wynn**

**Associate Director for Career & Technical Education  
Illinois Community College Board (ICCB)**

- A. Definitions
  - A. Illinois networks for Sustainability
  - B. National & international networks for Sustainability
  - C. Millenium Development Goals → Sustainable Development Goals
- B. Current knowledge from the “renewable” energy space
  - A. Hydrogen Economy Task Force
    - A. Education and Training updates
      - A. Operations
      - B. Transport and storage
      - C. First responders and local government
  - C. Sustainability applications at Illinois community colleges
- D. Evaluations & reflections on Sustainability

# Sustainability

## Definitions:

### Merriam Webster:

#### sustainability, adj.

1. capable of being sustained, or maintained at length without interruption or weakening
2. **a:** of, relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged *sustainable* techniques, *sustainable* agriculture  
**b:** of or relating to a lifestyle involving the use of sustainable methods *sustainable* society



### Oxford English Dictionary:

#### sustainability, n.

##### **1835–** sustainability, n.

The quality of being sustainable by argument; the capacity to be upheld or defended as valid, correct, or true.

##### **1953–** sustainability, n.

The quality of being sustainable at a certain rate or level.

##### **1980–** sustainability, n.

spec. The property of being environmentally sustainable; the degree to which a process or enterprise is able to be maintained or continued while...

<https://www.merriam-webster.com/dictionary/sustainability>

[https://www.oed.com/dictionary/sustainability\\_n?tab=meaning\\_and\\_use#19473065](https://www.oed.com/dictionary/sustainability_n?tab=meaning_and_use#19473065)



# Sustainability

The [United Nations Millennium Development Goals \(MDGs\)](#) are 8 goals that UN Member States have agreed to try to achieve by the year 2015.

Signed in September 2000.

Commits world leaders to combat:

1. Poverty
2. Hunger
3. Disease
4. Illiteracy
5. Environmental degradation
6. Discrimination against women.

MDGs were updated in September 2015 to the [Sustainable Development Goals](#)

The United Nations Sustainable Development Goals (SDGs) are 17 goals and targets all 191 UN Member States agreed to try to achieve by 2030.

Health has a central place in SDG 3. Almost all the other 16 goals are directly related to health or contribute to health indirectly. These new goals and targets build on the Millennium Development Goals of 2000, aiming to be relevant for all countries, with a focus on improving equity to meet the needs of women, children and the poorest, most disadvantaged people.



# Sustainability

- **Environment, Economics, and Society**
- **Triple Bottom Line**
- **Ability To Endure**

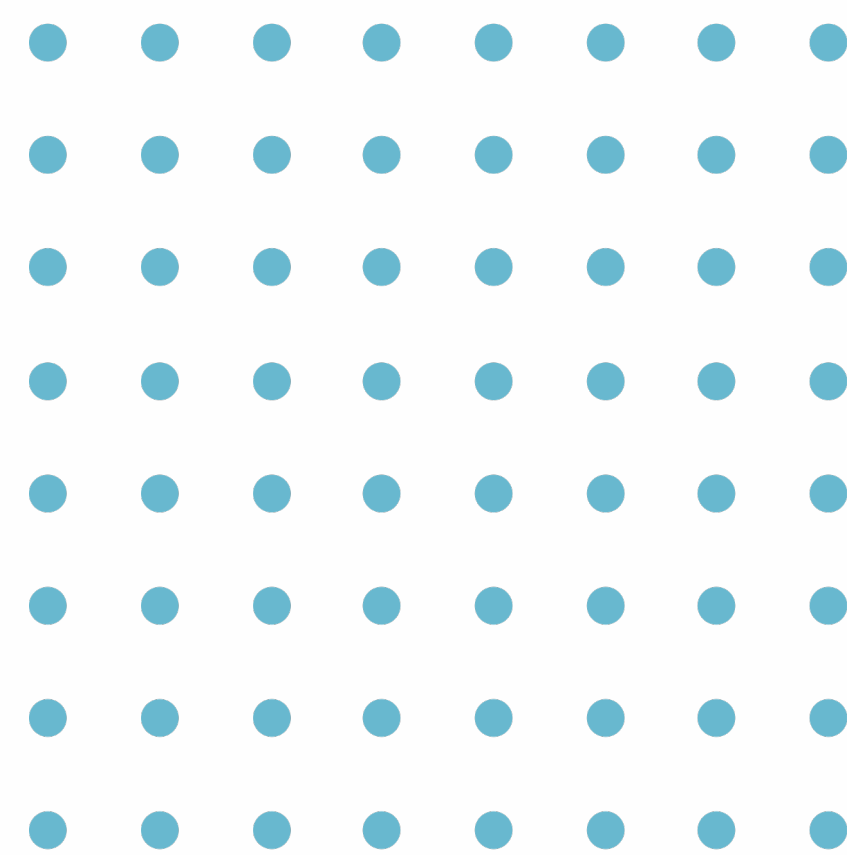
Community Colleges have mighty tasks ahead towards sustainability efforts.

- Improving efficiencies in training a skilled workforce qualified to do the necessary work of the renewable economy
- Keeping courses and curriculums updated through continuous improvement
- Annual advisory committee meetings with renewable energy sector partners
- Integrating on-the-job work experiences through required team-based challenges and work-based learning
- Not depleting natural resources by promoting low-impact, renewable energy alternatives
- Reduce, Reuse, Recycle → in that order

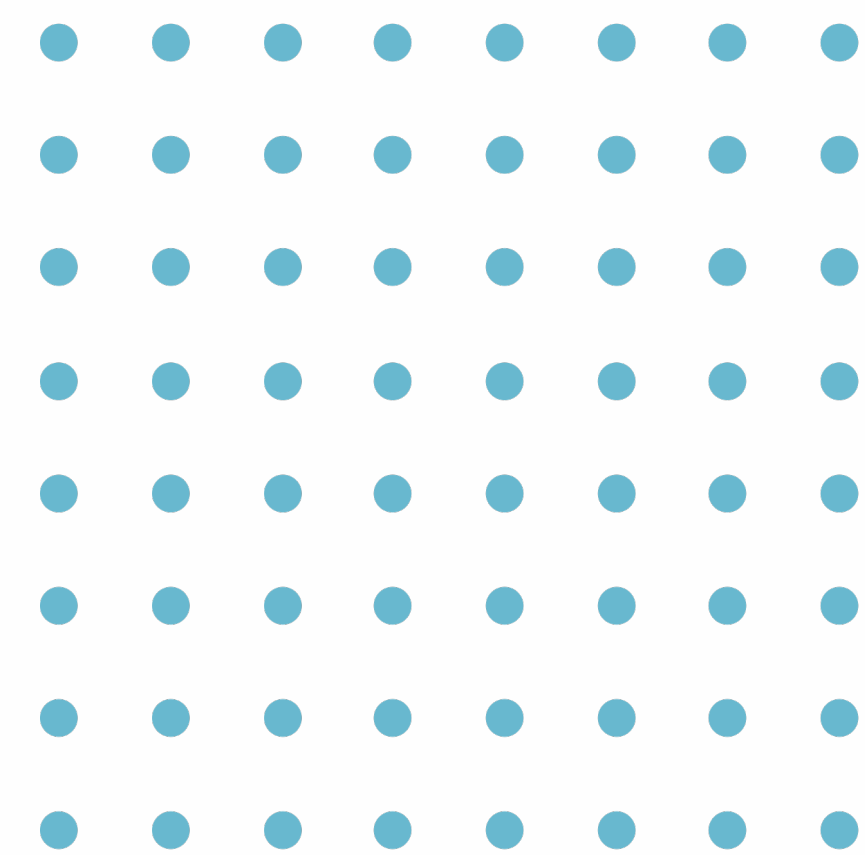
# Sustainability

## [Hydrogen Economy Task Force \(illinois.gov\)](https://illinois.gov)

- MACH H2
- Hydrogen Fuel Cell Partnership
- Nikola Motors
- Clean Jobs Coalition (CJC)
- Constellation
- Air Liquide
- Ameren
- MTD
- Gevo
- Nikola
- Trillium Energy
- American Petroleum Institute
- Exxon Mobil
- GTI Energy
- Mitshusbi Power Americas
- Hyzon
- Will County Center for Economic Development
- Harnyss
- H2 Power
- Primer on the Electric Grid from presenter: Dr. George Gross, University of Illinois College of Engineering
- Primer on Illinois' Electricity Market/Regulatory Structure from presenter: Carrie Zalewski, Illinois Commerce Commission
- Primer on Illinois' Integration of Renewable Energy from presenter: Sarah Duffy, Illinois Power Agency



# Sustainability



## Legislation that guides sustainability in Illinois

### Climate and Equitable Jobs Act – CEJA

- 3 programs to be administered 13 “Hubs”
  1. Clean Jobs Workforce Program
  2. Energy Transition Navigators
  3. Returning Residents
- With the Climate Works Pre-apprenticeship Program providing additional funding and support in 3 Department of Transportation regions 1, 2 and 3, and 4 and 5. [See IDOT map](#)

### Is your college in a CEJA Hub location?

1. Chicago West side → Several
2. Chicago Southwest side → Several
3. Joliet → Joliet Junior College
4. Waukegan → College of Lake County
5. Aurora → Waubensee
6. Rockford → Rock Valley
7. Champaign → Parkland
8. Peoria → Illinois Central College
9. Danville → Danville Area Community College
10. Decatur → Richland
11. Carbondale → Rend Lake, Shawnee, John A. Logan
12. East St. Louis → SWIC
13. Alton → Lewis & Clark



# ICCB's Directory of Programs

## **"renewable energy"**

ADVANCED RENEWABLE ENERGY TECH	Illinois Valley Community College
BASIC RENEWABLE ENERGY TECH	Illinois Valley Community College
RENEWABLE ENERGY	Lake Land College
RENEWABLE ENERGY TECHNOLOGY CERT.	College Of DuPage

## **"solar"**

SOLAR PV TECHNOLOGY	Kankakee Community College
SOLAR THERMAL TECHNOLOGY	Kankakee Community College

## **"wind"**

SMALL WIND TECHNOLOGY	Kankakee Community College
WIND ENERGY TECHNICIAN	Danville Area Community College





# IGEN's Directory of Renewable Certificates and Degrees

- [Renewable Energy Technology Certificate](#)  
College of DuPage
- [Wind Energy Technician Degree](#)  
Danville Area Community College
- [Energy Management](#)
- [Renewable Energy Certificate](#)
- [Energy Management](#)
- [Renewable Energy Degree](#)  
Elgin Community College
- [Renewable Energy Skills Certificate](#)  
Heartland Community College
- [Alternative Fuels Certificate](#)  
[Energy Technology Degree](#)  
Illinois Eastern Community Colleges
- [Renewable Energy Technician Certificate](#)  
Illinois Valley Community College

- [Electrical Engineering Technology – Renewable Energy Degree](#)
- [Small-Wind Technology Certificate](#)
- [Solar-Thermal Technology Certificate](#)
- [Solar-PV Technology Certificate](#)  
Kankakee Community College
- [Renewable Energy Certificate](#)
- [Renewable Energy Degree](#)
- [Renewable Energy Management Certificate](#)  
Lake Land College
- [Sustainable Energy Systems Certificate](#)
- [Sustainable Energy Systems Degree](#)  
Rock Valley College
- [Solar Photovoltaic Installation Tech Certificate](#)  
South Suburban College
- [Renewable Energy Technology Certificate and Degree](#)  
Triton College



# IGEN – Illinois Green Economy Network

## Lead Members

- [Carl Sandburg College, Galesburg](#)
- [City Colleges of Chicago, Chicago](#)
  - Harold Washington College
  - Harry S. Truman College
  - Kennedy-King College
  - Malcolm X College
  - Olive-Harvey College
  - Richard J. Daley College
  - Wilbur Wright College
- [College of Lake County, Grayslake](#)
- [Danville Area Community College, Danville](#)
- [Heartland Community College, Normal](#)
- [John A. Logan College, Carterville](#)
- [Joliet Junior College, Joliet](#)
- [Kankakee Community College, Kankakee](#)
- [Lake Land College, Mattoon](#)
- [Lewis and Clark Community College, Godfrey](#)
- [Lincoln Land Community College, Springfield](#)
- [McHenry County College, Crystal Lake](#)
- [Morton College, Cicero](#)
- [Prairie State College, Chicago Heights](#)
- [Rend Lake College, Ina](#)
- [Sauk Valley Community College, Dixon](#)
- [Shawnee Community College, Ullin](#)
- [Southwestern Illinois College, Belleville](#)
- [Triton College, River Grove](#)



# IGEN – Illinois Green Economy Network

## General Members

- [College of DuPage, Glen Ellyn](#)
- [Elgin Community College, Elgin](#)
- [Harper College, Palatine](#)
- [Illinois Eastern Community Colleges, Olney](#)
  - Frontier Community College, Fairfield
  - Lincoln Trail College, Robinson
  - Olney Central College, Olney
  - Wabash Valley College, Mt. Carmel
- [Illinois Valley Community College, Oglesby](#)
- [John Wood Community College, Quincy](#)
- [Kaskaskia College, Centralia](#)
- [Kishwaukee College, Malta](#)
- [Moraine Valley Community College, Palos Hills](#)
- [Oakton Community College, Des Plaines](#)
- [Parkland College, Champaign](#)
- [Richland Community College, Decatur](#)
- [Rock Valley College, Rockford](#)
- [South Suburban College, South Holland](#)
- [Southeastern Illinois College, Harrisburg](#)
- [Waubonsee Community College, Sugar Grove](#)



# AASHE – Association for Advancement of Sustainability in Higher Education

## Membership Directory



**College of Lake County**

[Sustainable CLC | College of Lake County \(clcillinois.edu\)](#)



**[McHenry County College](#)**



**[Joliet Junior College](#)**

Source: [AASHE Portal \(membersuite.com\)](#); Logo sources:  
[Joliet Junior College | Joliet, IL | Public Community College \(jjc.edu\)](#)  
[Home | College of Lake County | College of Lake County \(clcillinois.edu\)](#)  
[McHenry County College, Crystal Lake, Illinois](#)



# Thank you!

**Dana Wynn**

**Associate Director for Career & Technical  
Education at ICCB**

**[dana.wynn@illinois.gov](mailto:dana.wynn@illinois.gov)**

**Office: 618-583-2403**