
Greening Illinois' Economy

Community Colleges Spurring Sustainable Development

**A Report of the
Illinois Green
Economy Network
(IGEN) written by
Tim Glaza**

April 2013



Executive Summary

The Illinois community college system is well established and has extensive connections with communities, businesses, organizations, and governments. Economic stagnation and climate change are threats to the prosperity of Illinois and with the creation of the Illinois Green Economy Network (IGEN), community colleges are well positioned to offer solutions. Formed in 2008, IGEN is a consortium of Illinois community colleges formed to provide a platform for sharing best practices in sustainability and green training across campuses, curricula, workforce and every community in Illinois, as served by the 39 contiguous districts of those colleges. Through a collective impact approach, IGEN is working to spur green economic development in the areas of sustainable water use, community-based food systems, and renewable energy.

As a backbone support organization, (IGEN) has been creating a common agenda, facilitating mutually reinforcing activities, building a shared measurement system, and communicating continuously with stakeholders. IGEN is pursuing focused green economic development through three Green Economy Centers (GECs) located at College of Lake County (sustainable water use), Heartland Community College (community-based food systems), and Southwestern Illinois College (renewable energy). Using the framework of collective impact, GECs are leading the state of Illinois in green economic development.

About the author:

Tim Glaza is a Master of Science candidate in the Department of Politics and Government at Illinois State University. As a Returned Peace Corps Volunteer (Zambia 2008-11), Tim is participating in the Stevenson Center for Community and Economic Development at Illinois State University. For his professional practice, Tim is working as an assistant to the Green Economy Initiative at Heartland Community College from August 2012 to June 2013.

Acknowledgments:

I would like to thank the following people for their hard work, patience, support, and valuable contributions to the creation of this white paper. In addition, I am grateful to everyone involved with building the foundation and shaping the Illinois Green Economy Network (IGEN).

Cassandra Torstenson, Director of the Green Economy and Sustainable Water (IGEN), College of Lake County.

Catherine Dunlap, Associate Director of the Green Economy Initiative (IGEN), Heartland Community College.

Marcia Lochmann, Director of Green Jobs and the Green Economy Initiative (IGEN), Southwestern Illinois College.

Adrienne Tucker, Associate Director of the Green Institute (IGEN), Heartland Community College.

Julie Elzanati, Executive Director of the Illinois Green Economy Network (IGEN).

Wynne Coplea, Director of College Partnerships, Illinois Green Economy Network (IGEN).

Mary Beth Trakinat, Vice President of Continuing Education, Heartland Community College.

Contents

Economic and Environmental Imbalance.....5

A Shift in Thinking.....8

Discrete and Systemic Environmental Problems.....9

Collective Impact.....12

The Green Economy Centers.....15

College of Lake County.....17

Heartland Community College.....18

Southwestern Illinois College.....19

IGEN map.....20

References.....21

Economic and Environmental Imbalance

The economy of Illinois along with most of the United States is slowly recovering from the deep economic recession that started in 2007. Unemployment in Illinois for January 2013 was at 9.0% (Bureau of Labor Statistics 2012). Numerous economic indicators are still gloomy. Income inequality has increased, household debt remains high and wages have stagnated (Weller 2012).

In 2012, Illinois like most of the Midwest faced the worst drought in 50 years (Pearson & Abbey 2012). Water supplies have yet to fully recover and agriculture harvests have been quite low. More unusual and extreme weather is expected according to the Intergovernmental Panel on Climate Change, herein referred to as IPCC (2007). The IPCC is a group of the most well trained climate scientists from around the world. They have found that climate change is happening and that it is caused by greenhouse gas emissions from humans. A report from the World Bank (2012) highlights the urgent need to reduce greenhouse gas emissions to prevent a global temperature rise of 4° C. Even if current commitments towards reducing greenhouse gas emissions are met by the year 2100, there remains a 20% chance of at least a 4° C temperature increase. “A world in which warming reaches 4° C above preindustrial levels (hereafter referred to as a 4° C world), would be one of unprecedented heat waves, severe drought, and major floods in many regions, with serious impacts on human systems, ecosystems, and associated services” (World Bank 2012, p. xiv).

To address economic stagnation and climate change, the Economic Recovery Commission of Illinois (IERC), has issued a report describing what can be done. The IERC was formed by the State of Illinois and brought together leaders in a variety of

fields including business, education, technology, and government to explore how Illinois can build on its assets to grow the economy. They found that Illinois is in a unique position to grow the economy while relying on sustainable technologies that benefit the environment (Economic Recovery Commission [ERC] 2010). The Sustainable Energy Committee on the ERC recommends that any plan for economic growth must include significant actions to grow the green economy.

A 2010 study by the Illinois Department of Employment Security (IDES) found that Illinois has 115,208 green jobs and this sector is expected to grow at an annual rate of 13.4% from 2012-2014. The IDES defines a green job as “a job in which the work is essential to products or services that improve energy efficiency, expand the use of renewable energy or support environmental sustainability” (p. 1). Illinois and the federal government have been investing in the green economy through a variety of grants and projects. The Illinois Department of Commerce and Economic Opportunity is funding the Illinois Community College Targeted Energy Management Training (ICCTEMT) program with the goal to help build capacity around energy management for community college staff, students, and general business communities.

Another green economic development program is being funded by the United States Department of Labor with a focus on workforce development. The Trade Adjustment Assistance Community College and Career Training (TAACCT) grant is being implemented by many Illinois community colleges through more than 30 online-hybrid associate degrees and certificates.

In a report by the Brookings Institution, *Sizing the Clean Economy*, it was found that people in green jobs, even those who are less educated, make more than their

counterparts in non-green jobs. “Median wages in the clean economy—meaning those in the middle of the distribution—are 13 percent higher than median U.S. wages. Yet a disproportionate percentage of jobs in the clean economy are staffed by workers with relatively little formal education in moderately well-paying “green collar” occupations” (Muro, Rothwell, & Saha 2011, p. 4). Further, job growth for “green jobs” increased much quicker than total job growth. The Pew Charitable Trusts found that “between 1998 and 2007, clean energy economy jobs—a mix of white and blue-collar positions, from scientists and engineers, to electricians, machinists, and teachers—grew by 9.1 percent, compared to 3.7 percent for total job growth” (AACC, 2011, p. 1). It is clear that the green economy is growing but it is important to ask what is meant by the green economy.

The green economy is defined in numerous ways. In 2008, University of California-Berkeley professor Karen Chapple wrote “the green economy is not just about the ability to produce clean energy, but also technologies that allow cleaner production processes, as well as the growing market for products which consume less energy, from fluorescent light bulbs to organic and locally produced food. Thus, it might include products, processes, and services that reduce environmental impact or improve natural resource use” (p. 1).

The green economy can be conceptualized as having two parts. The first part, the core green economy, “contains companies and institutions providing products and services that conserve resources, provide clean alternatives, reduce pollution and repurpose waste” (St. Louis RCGA, 2011, p. 4). The other part, the adaptive green economy, “encompasses companies and institutions that undertake serious efforts to green their products, processes, and supply chains” (St. Louis RCGA, 2011, p. 4).

Another dimension to the green economy influences people in a more direct way. The United Nations Environment Programme (2011) defines the green economy as “one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities” (p. 16).

The definition of the green economy has been evolving and consensus remains out of reach. The green economy can be found in a variety of economic sectors yet there is a challenge in measuring and formalizing it. However, there has been growth in the number of green economic jobs and a strong demand for more. Andrew Liveris, Dow Chemical Company CEO, claimed that, “a renaissance is within reach, if Americans are the ones who design and build the new [clean economy] technologies it will re-energize commerce in the United States, creating, without a doubt, millions of high-paying jobs” (Muro, Rothwell, & Saha 2011, p.7).

There is an urgent need for green economic development in the United States. The Global Green Economy Index (2012) has been compiled by the consultancy firm, Dual Citizen Inc. to rank how countries perform in the area of green economic development. The United States is perceived by other countries to be the 4th most green economy but in fact, the actual performance of the United States keeps it out of the top 10 rankings. The economy in the United States has historically been an innovative economy but is falling behind in the area of green economic development.

A Shift in Thinking

Businesses are beginning to embrace opportunities in the green economy. A business that focuses on people, planet and profit is concerned with the triple bottom line. The triple bottom line is used to capture “the essence of sustainability by measuring the

impact of an organization's activities on the world ... including both its profitability and shareholder values and its social, human and environmental capital” (Slaper & Hall, 2011). This concept of the triple bottom line is quickly becoming the new norm.

Governments, businesses, and organizations are making sustainability a top priority. A study that surveyed thousands of companies from 113 countries appeared in the MIT Sloan Management Review (2012). The study, “Sustainability Nears a Tipping Point,” focused on 3,000 executives and their responses. It found that 70% of companies place sustainability permanently on their management agendas. 66% of respondents said “sustainability was necessary to being competitive in today’s marketplace, up from 55% in our 2010 survey” (MIT Sloan Management Review, p. 3). Businesses around the world are increasingly including sustainability into their strategic plans. Businesses find out what makes sense for them and are able to tailor sustainability to fit their needs. Greenbiz.com has released the State of Green Business (2012) report indicating that for many businesses, sustainability has become “...normal, even mundane...” (Makower & editors, p. 5).

Discrete and Systemic Environmental Problems

Governments, businesses, and organizations have not always worried about sustainability and environmental impact. Economic development has often been perceived to be at odds with environmental sustainability. The United Nations Environment Programme (2011) claims that environmental sustainability and economic progress move together. “Perhaps the most prevalent myth is that there is an inescapable trade-off between environmental sustainability and economic progress. There is now substantial evidence that the greening of economies neither inhibits wealth creation nor

employment opportunities. To the contrary, many green sectors provide significant opportunities for investment, growth and jobs” (p. 16). It is worth noting briefly how environmentalism has become part of economic development. Fiskel et. al (2009) trace the environmental movement in the United States and show how it has evolved. The focus during the 19th century was on land conservation. There was a shift during the 20th century to focus on human health risk and site specific problems. The focus for the 21st century has been and will continue to be on complex regional and global problems.

Through the 19th and 20th centuries, environmental issues have been approached largely in isolation. Tracts of land have been conserved as part of the National Park system, dirty rivers have been cleaned up, and some deforested areas have been replanted and allowed to regenerate. These types of issues can be considered technical problems. As described by Kania & Kramer (2011), technical problems are well defined, the answer is known in advance, and one or a few organizations have the ability to implement the solution, e.g. funding a college scholarship or building a hospital.

The 21st century is facing more complex, systemic, economic and environmental problems that cannot be solved in isolation. More complicated problems are considered adaptive. Adaptive problems are complex, the answer is not known in advance, and even if it were, no single entity has the resources or authority to bring about the necessary change, e.g. reforming public education, adapting to climate change.

Adaptive problems require a systemic solution. “Despite the dominance of this approach, there is scant evidence that isolated initiatives are the best way to solve many social problems in today’s complex and interdependent world. No single organization is responsible for any major social problem, nor can any single organization cure it” (Kania

& Kramer, 2011, p. 39). Our transition to a green economy requires that we solve adaptive problems, e.g. climate change and economic recession, with an adaptive solution. Kania and Kramer (2011) provide an approach, collective impact, which fosters adaptive solutions for handling complex issues.

Globalization, interdependency, and climate change are driving collective problem solving. Makower (2009) writes about how the environmental challenge has evolved in that local problems of the past are different from global problems of today. Environmental problems of the past were and some that persist today are “local, immediate, visible, relatively singular in cause (i.e., factories dumping waste into the river), short-lived (i.e., the river was cleaned up within a decade), and thus solvable” (Makower, 2009, p. 14). In addition to these singular problems, there is now climate change. “It is global, largely invisible, resulting from millions of sources over a century or so. Its magnitude and persistence make it debatable whether it can ever be controlled, let alone solved” (Makower, 2009, p. 14).

Fiskel et.al (2009) quote Senge (and colleagues) who advocate thinking through a systemic framework, “if we see each problem—be it water shortages, climate change, or poverty—as separate, and approach each separately, the solutions we come up with will be short-term, often opportunistic quick fixes that do nothing to address deeper imbalances” (p. 8718). Makower (2009) agrees with Senge et. al. “These are problems that cannot be solved by doing a few simple things. Today’s environmental challenges are far beyond anything we’ve faced before, affecting not just the birds and the trees but also, potentially, the economics, public health, and well-being of all humans, too” (p.14).

In this new century, solving environmental problems requires a fundamental shift in our economics and our approach to solving problems.

Collective Impact

Collective impact is an innovative framework for tackling adaptive problems. It is defined as “the commitment of a group of important actors from different sectors to a common agenda for solving a specific social problem” (Kania & Kramer, 2011, p. 36). Although many actors, including government, businesses, and organizations have become more environmentally conscious and pursued green economic development at some level, system-wide progress remains elusive. There has also been a struggle for initiatives to work synergistically and avoid duplicating efforts. Collective impact is much more than mere collaboration. “Unlike collaborations, collective impact initiatives involve a centralized infrastructure, a dedicated staff, and a structured process that leads to a common agenda, shared measurement, continuous communication, and mutually reinforcing activities among all participants” (Kania & Kramer, 2011, p. 38).

The large-scale systemic change that is needed for green economic development can come from many participants working in unison rather than from individual entities acting in isolation. In contrast to collective impact, isolated impact is “an approach oriented toward finding and funding a solution embodied within a single organization, combined with the hope that the most effective organizations will grow or replicate to extend their impact more widely” (Kania & Kramer, 2011, p. 38). Collective impact rejects the idea that isolated organizations only need to scale up to have success. Collective impact is an approach that relies on diverse actors to connect and work together through the five conditions of collective impact.

There are five conditions identified by Kania & Kramer (2011) for collective impact success:

1. Common agenda: shared vision for change and a common understanding of the problem.
2. Shared measurement system: agreement on the ways success will be measured and reported. Same types of activities require same measurements.
3. Mutually reinforcing activities: actions should be coordinated to reinforce each other. Actors play their roles based on their capabilities and strengths.
4. Continuous communication: there is a strong need to develop trust and for consistent participation.
5. Backbone support organization: a platform that is able to create and manage collective impact as a separate organization and staff with a very specific set of skills to serve as the backbone for the entire initiative.

The community college system has a record of bringing diverse stakeholders together for a collective action. Working people and the economy are connected through education and community colleges are critical for providing the economy with an educated workforce. From 1993-2002, community college enrollment has grown 7.8% faster than four-year college enrollment (Vaughn 2006). Illinois' well established and flourishing community colleges are connected through the Illinois Green Economy Network (IGEN). IGEN is a consortium of Illinois community colleges formed to provide a platform for sharing best practices in sustainability and green training across campuses, curricula, workforce and every community in Illinois, as served by the 39

contiguous districts of those colleges. IGEN builds on existing assets and can reveal new partnerships and resources. IGEN's work on community college campuses has been successful in creating collective impact. "Collective impact efforts are most effective when they build from what already exists; honoring current efforts and engaging established organizations, rather than creating an entirely new solution from scratch" (Hanleybrown, Kania, & Kramer, 2012, p. 6).

IGEN provides the backbone support organization needed to facilitate the other conditions for collective impact success. "Backbone organizations embody the principles of adaptive leadership: the ability to focus people's attention and create a sense of urgency, the skill to apply pressure to stakeholders without overwhelming them, the competence to frame issues in a way that presents opportunities as well as difficulties, and the strength to mediate conflict among stakeholders" (Kania & Kramer, 2011, p. 40). By working within the community college system, IGEN has established the trust and credibility of being a neutral and fair mediator and facilitator.

Complex issues such as climate change or reforming the school system do not have a clear, pre-determined solution. Solutions often emerge through stakeholder interactions. Collective impact provides a conducive environment for stakeholders to discover resources, opportunities, and solutions that were previously unknown. The process of collective impact becomes a solution in itself. "The power of collective impact lies in the heightened vigilance that comes from multiple organizations looking for resources and innovations through the same lens, the rapid learning that comes from continuous feedback loops, and the immediacy of action that comes from a unified and

simultaneous response among participants” (Kania & Kramer, 2013, p. 2). As a convener, IGEN has provided an excellent opportunity to catalyze green economic development.

The Green Economy Centers

As IGEN’s lead administrative colleges, the College of Lake County, Heartland Community College, and Southwestern Illinois Community College have established Green Economy Centers. The mission of the Green Economy Centers is to operate in the community college environment within the IGEN network to spur green economy initiatives through collaborations with regional stakeholders based on changing green market demands. As shown in figure 1, these green economy initiatives can have many levels of reach.

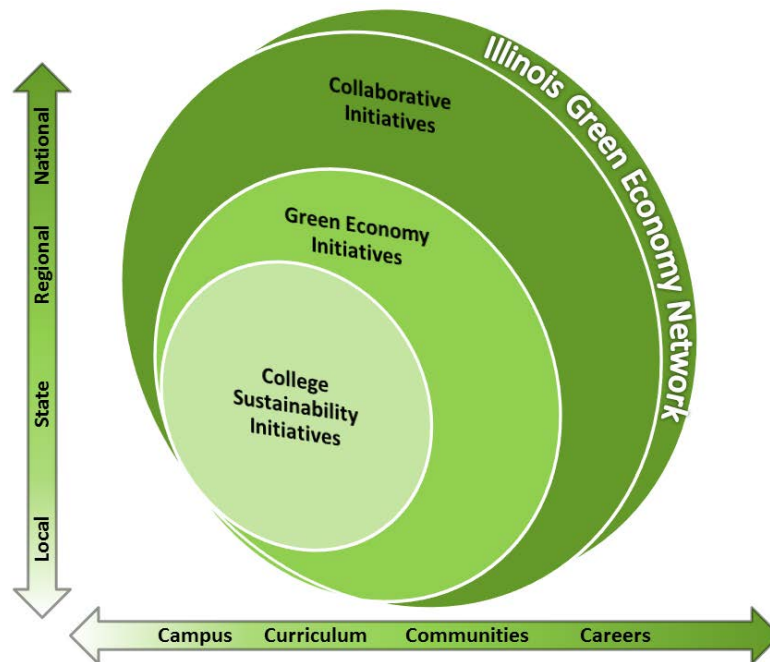


Figure 1: IGEN organization concept.

Green Economy Centers (GECs) accomplish the shared mission by providing resources, referrals and forums, facilitating collaboration, acting as promoters for those businesses and organizations seeking to be more sustainable in their operations.

Illinois' three GECs will be managed by designated community colleges and located on their respective campuses. Each GEC will collaborate with the Illinois Green Economy Network (IGEN) and all 48 community college campuses. While there are no hard regional boundaries, each GEC will communicate with community college sustainability professionals to ensure all institutions receive appropriate services and opportunities for engagement. GECs will work on regionally developed initiatives and contribute to a learning atmosphere.

Each GEC will:

- Work on specific green economic development initiatives in their community
- Facilitate strategic relationships among stakeholders
- Communicate through the statewide IGEN network by establishing sector based working groups, participating in monthly GEC Director conference calls and contributing to IGEN newsletters.
- Develop a sector based toolbox containing resources to share with other GECs
- Seek out and obtain funding for green economic development projects
- Collaborate with other GECs, TAA representatives, and employers to create and develop a Green Employer Alliance

- Create green-related professional development opportunities for businesses, college faculty and staff
- Compile an annual report documenting the GEC story

The Green Economy Centers are able to unite important actors who are committed to greening the economy along a common, progressive path. The Green Economy Centers provide centralized infrastructure, dedicated staff, and a proven process that is able to capture the five conditions of collective impact as defined by Kania & Kramer (2011).

College of Lake County

The College of Lake County GEC is focusing on freshwater and will be located at the Freshwater Institute. Freshwater is the drinking water resource for nearly 13 million people in the State of Illinois and over 700,000 people in Lake County, Illinois. In Lake County, two major freshwater resources are available – Lake Michigan and groundwater. This supply is under pressure, and world water scarcity issues are increasing. It is in this place – Lake County, Illinois - where we can expand and advance our understanding of this essential resource and the stewardship of freshwater.

Overall the Institute has three main purposes. First, it will move research to practice by teaching sustainable water practices. Second, it will explore timely and important questions related to freshwater, such as drinking water, wastewater, green infrastructure, local and regional watersheds and the collective issues and impacts these watersheds have on the environment and local communities. Third, it will advocate for teaching best practices to sustain freshwater. The Center will be modeled after the National Great Rivers Research and Education Center in Alton, Illinois.

Heartland Community College

The Heartland Community College GEC is focusing on community-based food systems. Food is essential to life and in the fertile soil and temperate climate of central Illinois hundreds of types of fruits and vegetables, staple grains and livestock for meat, eggs, and milk can be grown. Yet over 95% of the food purchased and consumed in Illinois is grown outside of the region (Meter 2011). The Edible Economy Project in partnership with Heartland Community College and a number of other community partners are working to create an environment where locally sourced food can thrive.

Working with local farmers, schools, businesses, and community members in 32 central Illinois counties, the GEC is facilitating the development of community-based food production, distribution, and processing systems. The goal is to foster a healthier, more self-sufficient community where more local money is retained in the local economy. If central Illinois consumers bought 15% of their food directly from local farms, \$639 million of new revenue would be generated annually (Meter 2011).

In May 2012, Heartland Community College received a United States Department of Agriculture Rural Business Enterprise Grant for \$99,000 to provide technical assistance to farmers as they organize themselves into a network of at least three minimal on-farm food hubs connected through a coordinated ordering, invoicing, planning, transportation and information sharing system. Each minimal hub will aggregate product from at least six nearby farms. In this low risk, low capital, farmer driven project, hubs will use existing on-farm facilities. These on farm food hubs will create a more efficient aggregation, transportation, and distribution system allowing fresh locally sourced food to become more readily available to large institutional buyers.

Southwestern Illinois College

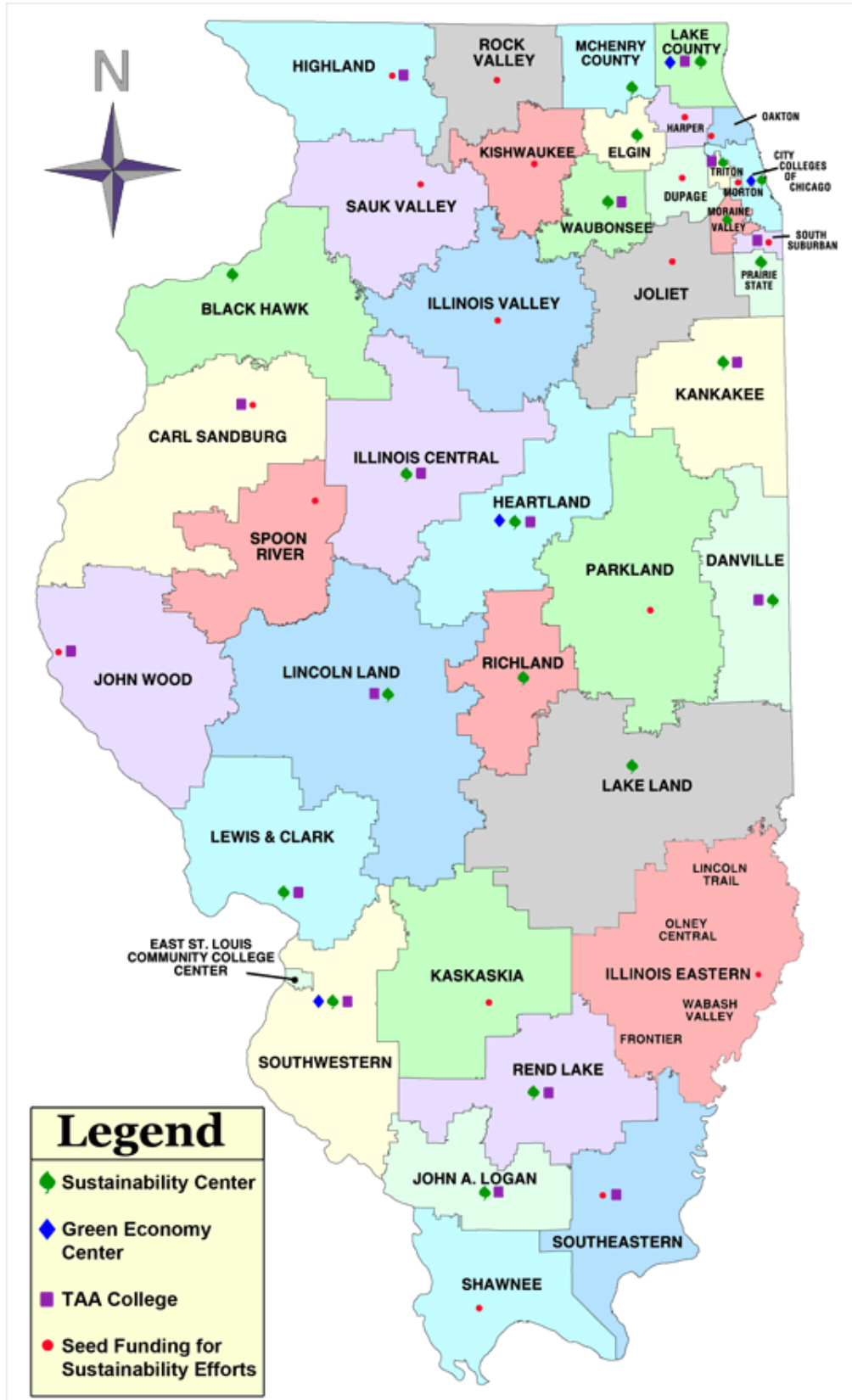
The Southwestern Illinois College (SWIC) GEC is focusing on clean energy. The State of Illinois is rich with energy potential as a primary transportation portal with over a dozen interstate natural gas and petroleum pipelines, an oil port and two natural gas market centers. The Prairie State ranked fourth in the U.S. in 2011 in oil refining capacity and third in coal reserves in 2010. Illinois is a top producer of ethanol, ranking third in the U.S. in 2011 and ranks first for nuclear power generation.

At the same time, the World Resources Institute (2007) ranks Illinois the third largest contributor to greenhouse gas emissions in the U.S. Emissions generated by electric power rose 53% between 1990 and 2003, more than double the increase across the country (Larson 2007).

Led by SWIC, community colleges are the prime location to install renewable energy technologies because the schools are already integrating energy efficiency across the state at a massive scale. Illinois community colleges are now increasing renewable energy purchases to drive down energy use from fossil fuels and create a market for renewable energy technologies in our state.

To complement the renewable energy technologies on community college campuses, IGEN and the Department of Commerce and Economic Opportunity have agreed that smart grid training is another platform that is ideally demonstrated at the community college. The primary focus of this program is on building smart grid classrooms to provide job training for various academic areas (electrical, IT, renewable energy, building/construction, etc.)

Illinois Green Economy Network



References

- American Association of Community Colleges (AACC) (2011). Community colleges in the emerging green economy: Charting a course and leadership role. Retrieved from <http://www.theseedcenter.org/About-SEED/SEED-in-2011---2012/AACC-SEED-Strategic-Plan-FINAL-03-11>
- Bieneman, D. & Harris, Y. (2011, October). Green jobs: A growing part of Illinois' economy. Retrieved from <http://www.ides.illinois.gov/page.aspx?item=2293>.
- Bureau of Labor Statistics. (2013, March 19). Economy at a glance, Illinois. Retrieved from <http://www.bls.gov/eag/eag.il.htm>.
- Chapple, K. (2008, November). Defining the green economy: A primer on green economic development. Retrieved from <http://communityinnovation.berkeley.edu/reports/Chapple%20-%20Defining%20the%20Green%20Economy.pdf>.
- Dual Citizen Inc. (2012). Global green economy index: an analytic tool measuring national green reputations and performance. Retrieved from <http://www.dualcitizeninc.com/ggei2012.pdf>
- Economic Recovery Commission. (2010, June 24). Report of the Economic Recovery Commission, state of Illinois. Retrieved from <http://www2.illinois.gov/economy/Pages/default.aspx>.
- Fiskel, J., Graedel, T., Hecht, A. D., Rejeski, D., Sayler, G. S., Senge, P. M., Swackhamer, D. L., & Theis, T. L. (2009, October 12). EPA at 40: Bringing environmental protection into the 21st century. *Environmental Science & Technology*, 43(23), 8716-8720. Retrieved from

http://www.uic.edu/depts/ovcr/iesp/Publications/Faculty%20Publications/Theis/Theis_EPA%20at%2040.pdf.

Hanleybrown, F., Kania, J. & Kramer, M. (2012). Channeling change: Making collective impact work. Retrieved from http://www.ssireview.org/blog/entry/channeling_change_making_collective_impact_work?cpgn=WP%20DL%20-%20Channeling%20Change.

Kania, J., & Kramer, M. (2013). Embracing emergence: How collective impact addresses complexity. Retrieved from http://www.ssireview.org/blog/entry/embracing_emergence_how_collective_impact_addresses_complexity.

Kania, J., & Kramer, M. (2011). Collective impact. *Stanford Social Innovation Review*, 9(1), 36-41. Retrieved from http://www.ssireview.org/articles/entry/collective_impact.

Illinois Community College Targeted Energy Management Training (ICCTEMET).
Illinois Department of Commerce and Economic Opportunity.
http://www.igence.org/igen/energy_programs.htm.

International Panel on Climate Change. (2007). Climate change 2007: Synthesis report. Retrieved from http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm.

Larsen, J. (2007). Charting the midwest: Inventory and analysis of greenhouse gas emissions. World Resources Institute.

Makower, J. & editors of GreenBiz.com. (2012, January). State of Green Business 2012. Retrieved from <http://www.greenbiz.com/research/report/2012/01/state-green-business-report-2012>.

Makower, J. (2009). *Strategies for the green economy: Opportunities and challenges in the new world of business*. New York, NY: McGraw Hill.

Meter, K. (2011). Central Illinois local farm and food economy: highlights of a data compilation. Crossroads Resource Center.

Meyer, S. M. (1995). The economic impact of environmental regulation. *Journal of Environmental Law and Practice*. Retrieved from <http://web.mit.edu/polisci/mpepp/Reports/Econ%20Impact%20Enviro%20Reg.pdf>.

MIT Sloan Management Review & The Boston Consulting Group. (2012, January 23). Sustainability nears a tipping point. Retrieved from <http://sloanreview.mit.edu/feature/sustainability-strategy/>.

Muro, M., Rothwell, J., & Saha, D. (2011, July 13). Sizing the clean economy: A national and regional green jobs assessment. Retrieved from <http://www.brookings.edu/research/reports/2011/07/13-clean-economy>

Pearson, M., & Abbey, M. (2012, July 17). U.S. drought biggest since 1959, climate agency says. Retrieved from <http://www.cnn.com/2012/07/16/us/us-drought/index.html>.

Slaper, T. F., & Hall, T. J. (2011). The triple bottom line: What is it and how does it work? *Indiana Business Review*. Retrieved from <http://www.ibrc.indiana.edu/ibr/2011/spring/article2.html>.

- St. Louis Regional Chamber & Growth Association (RCGA) (2011). The St. Louis Greenprint 2012: An action plan for growing our region's green economy.
- The World Bank. (2012). Turn down the heat: Why a 4° warmer world must be avoided. Retrieved from <http://climatechange.worldbank.org/content/climate-change-report-warns-dramatically-warmer-world-century>.
- Trade Adjustment Assistance Community College and Career Training (TAACCT). United States Department of Labor. http://www.igencec.org/igen/career_pathways.htm.
- United Nations Environment Programme. (2011). Towards the green economy: Pathways to sustainable development and poverty eradication. Retrieved from <http://www.unep.org/greeneconomy/greeneconomyreport/tabid/29846/default.aspx>.
- Vaughn, G. (2006). The community college story. Washington DC: Community College Press.
- Weller, C. E. (2012, November 26). Economic snapshot for October 2012. Retrieved from <http://www.americanprogress.org/issues/economy/report/2012/11/26/45910/economic-snapshot-for-november-2012/>