

# Iowa

## Summary and Analysis

For a state with a relatively small population and gross state product, Iowa has developed impressive leadership in two clean-energy industries, biofuels and wind. Among the innovative programs are the following:

- the Bioeconomy Institute, which provides a research basis for innovation in the state's biofuels industry
- the Iowa Alliance for Wind Innovation and Novel Development, which will help the state transition from wind-energy production and manufacturing to technology innovation;
- the New Jobs Training Program, which enables community colleges to sponsor new programs through revenue bonds; and
- the Grow Iowa Values Fund and Iowa Power Fund, which can support clean-energy business development.

## General Background Policy

**Energy Goals.** In 2005 Executive Order 41 established a target that state agencies receive 10 percent of their electricity from renewable sources by 2010. In 2007 Iowa joined the Midwestern Regional Greenhouse Gas Reduction Accord, which established a 10 percent renewable energy standard by 2015. The state also has a target of 105 megawatts of electricity from renewable energy sources for the two main investor-owned utilities (about half of the 1990 peak load for the utilities). The state has an energy-efficiency resource standard of 1.5 percent per year for electricity and natural gas (SF 2386). Legislation passed in 2007 (SF 485) also established the Iowa Climate Change Advisory Council, which developed plans for greenhouse gas reductions under scenarios of 50 percent and 90 percent by 2050. In 2007 the state also approved legislation (HF 918) that created the Office of Energy Independence to coordinate state government initiatives (EPA 2008).

**Public Benefits Fund.** Iowa does not have a public benefits fund (DSIRE 2010).

**Green-Buildings Policy.** In 2005, Governor Vilsack issued the executive order (41) to have state government buildings reduce electricity and natural gas consumption by 15 percent by 2010. In 2007 the state's energy independence plan mandated audits for all state buildings and energy retrofits. In 2008, Governor Chet Culver issued a new executive order (No. 6) that established green building goals for the state government's buildings and led to the creation of the state government's Green Government Master Plan (State of Iowa 2009). The Energy Excellent Buildings Task Force was charged with reducing energy and water consumption in state buildings by an additional 15 percent by 2013 (DSIRE 2010).

**Green Jobs Training.** An innovative program is Iowa's New Jobs Training Program, which allows community colleges to issue bonds to pay for programs for students who will find jobs in growing industries, such as wind and biofuels. The bonds are retired through a diversion of 1.5 to 3 percent of the state withholding taxes from wages of the new positions. Funding for green jobs training from the ARRA (\$6 million in 2010) went to Iowa Workforce Development. The state is also developing a green workforce development plan (State of Iowa 2010a)..

## **Clean-Energy Industries**

**General Policy.** In 2005 Iowa approved the Grow Iowa Values Fund for \$500 million over ten years (HF 809, 868). The fund provides support for the state's Department of Economic Development for start-ups, recruitment, and retention. Some of the fund has supported biofuels and wind power development (State of Iowa 2010b). In 2007 Iowa passed HF 927, which provided the basis for General Iowa Power Fund of \$100 million over four years. As of 2010 the fund had supported about \$37 million in direct investments in the wind, biofuels, and renewable energy sectors. The state also offers a research activities credit for companies and other business credits for renewable-energy production. Less directly relevant to support for clean-energy industries is the I-Jobs legislation, which was passed in 2010 and provides \$875 million in bond-supported funding. Most of the funding is for infrastructure, but some of it is for economic development programs. With respect to clean-energy industries, Iowa is known mostly for biofuels and wind energy.

**Biofuels.** Iowa is the national leader of biofuels production (first in ethanol and second in biodiesel), and the state government has supported the industry through the General Iowa Power Fund and a renewable fuels standard of 25 percent by 2019. In 2008 Governor Chester Culver's Executive Order 6 established the Biofuels Task Force to develop state government use of biofuels in its fleets (EPA 2008). In 2009 Governor Culver also supported an increase in the federal mandate for ethanol to 15 percent, a change that he claimed would create about \$24 billion in import substitution revenue for the country (State of Iowa 2009). In the same year the governor signed Executive Order 3, which set a goal of shifting the state's vehicle fleet to flex-fuel vehicles that could use the E85 ethanol blend. Iowa State University also has impressive research resources that are brought together in the Bioeconomy Institute (2009), which has over 150 affiliated faculty and over \$50 million in research funding spread across various programs. The research is helping the industry to expand not only for biofuels production but also for coproducts. Among the large grants to the university is a \$22.5 million partnership with Conoco-Phillips and the National Renewable Energy Laboratory for cellulosic ethanol research. The company POET also received an \$80 million grant from the U.S. Department of Energy to create a commercially viable cellulosic ethanol facility, and the state is home to the Renewable Energy Group, which is among the fifty "hottest" biofuels firms in the country.

**Wind.** Iowa has the second highest level of wind energy production in the country, due largely to its decision to become one of the first states to develop a renewable electricity standard. The state has won some large wind manufacturing contracts, and it is home to 200 companies that either manufacture or provide services in the wind industry (Trabish 2010). The manufacturing industry employs about 2300 people (Culver 2010). There is no single

geographical cluster of major manufacturers in the state, but most are located in the area around Des Moines and Cedar Rapids, as well as in the southeastern corner of the state. The state's General Iowa Power Fund has provided funding for wind energy at the University of Iowa and a plan to store wind energy in a compressed air facility. In 2009 the state government also improved the use of tax credits for small wind projects and incentives for wind manufacturers.

The Iowa Alliance for Wind Innovation and Novel Development is a state government initiative intended to promote wind energy research, testing, training, and education across the state's research universities, community colleges, and businesses. The organization's web site includes a detailed summary of intrastate research resources relevant to the wind industry. The organization also hosted a conference with the Iowa Wind Energy Association in 2010, and other conferences have been held in previous years. The University of Iowa has a Wind Energy Working Group. One negative point in a generally positive series of developments is that the state lost the 2009 competition for the \$45 million wind energy test bed facility to South Carolina.

## **Des Moines**

Iowa does not have a large city with a politically powerful constituency of low-income neighborhoods that are pushing for green jobs from the grassroots. The largest city, Des Moines, has a low unemployment rate similar to that of some other small cities in the Midwest. As a result, sustainability initiatives at the urban level tend to be disconnected from national efforts to build low-income green jobs programs, such as weatherization. Likewise, the city's sectoral strengths are in insurance, finance, publishing, and government rather than the ethanol and wind industry. Consequently, the high-tech side of green jobs development is also not a major part of the economic development picture at the urban level. The connection with the state's ethanol industry is primarily through the biotechnology corridor that runs between Des Moines and Iowa State University to the north (Greater Des Moines Partnership 2010). Attempts to build an ethanol plant in the Agrimergent Technology Park failed due to credit problems (Eckhoff 2008).

The city is concerned with sustainability issues in the more traditional sense of urban design, greening, and quality of life. The mayor, Frank Cownie, established the Des Moines Energy and Environmental Task Force, and the city has been selected as one of four sites for measuring environmental and sustainability factors associated with the International Council for Local Government Initiatives (2006). Based on recommendations from the task force, in 2007 the city council approved the Energy Conservation and Environmental Enhancement Policy. In response, the mayor created a sustainability team composed of seven members from across different departments (Green Des Moines 2010).

## **Civil Society Organizations and Policy**

Iowa's developments in the biofuels and wind-energy industries appear to be driven by policymakers who are responding to needs of the state's agricultural sector as well as the loss of manufacturing jobs. The state does not have active Blue-Green Alliance and Apollo Alliance

chapters, and there is not the same level of grassroots advocacy for green jobs found in the cities of other states. The state's Sierra Club chapter has information on legislative activity and advocacy, but here the emphasis is on energy demand policies. In 2010 the chapter's legislative priorities include the following: "renewable energy solutions, distributed generation through feed-in tariffs, property-assessed clean-energy bills (PACE), and a bill that requires disclosure to utility customers of the percent electricity derived from alternative and renewable energy sources" (Sierra Club 2010). The chapter is also supporting green building codes and opposing legislation that supports nuclear power.

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