

IOWA RENEWABLE ENERGY POLICY: HOW DID WE GET HERE AND WHERE ARE WE GOING?

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Iowa's Energy Resource Mix

Source: 2012 EIA Data



Wind Energy

- Iowa is #1 in the nation for the percentage of electricity generated by wind energy at 31.3%
- Iowa ranks 2nd in total wind generation
- Installed wind capacity: 5,177 megawatts (MW). Iowa ranks 3rd for total MW installed
- Number of wind turbines: 3,216 turbines. Iowa ranks 3rd for number of utility-scale wind turbines
- Wind projects online: 101 wind projects
- Wind capacity under construction: over 1,055 MW
- It has been said that Iowa has the potential to supply over 40% of its energy needs with wind energy in the next five years and it could more than triple the supply by 2030.

Sources: AWEA State Energy Statistics – Iowa , http://www.awea.org/Resources/state.aspx?ltemNumber=5224 and http://www.awea.org/MediaCenter/pressrelease.aspx?ltemNumber=7713

Iowa's Wind Generation and Manufacturing Facilities



Iowa's Wind Capacity By Year	
Year	MW
1992	0.25
1993	0.39
1997	1.20
1998	3.00
1999	230.70
2001	81.75
2002	98.43
2003	45.57
2004	162.00
2005	202.31
2006	103.05
2007	260.70
2008	1,599.75
2009	879.85
2010	3.10
2011	646.70
2012	858.88
Under Construction	1,056.37
Total	6,233.99

Source: AWEA State Energy Statistics - Iowa , http://www.awea.org/Resources/state.aspx?ItemNumber=5224

Other Renewables

Installed Renewable Energy Capacity (2012)		
Solar PV	1.2 MW	
Hydro	131.3 MW	
Biomass/Waste	14.6 MW	
Ethanol	3,848 mGy	
Biodiesel	305 mGy	

Source: American Council On Renewable Energy (ACORE), Renewable Energy in the 50 States: Midwestern Region (Updated October 2013)

The Bottom Line

IOWA IS A NET EXPORTER OF ENERGY

The Journey

- FEDERAL ACTION: PURPA (1978); EPACT (2005); Presidential Initiatives and the EPA
- STATE ACTION:
 - Iowa's Own Mini PURPA
 - IUB Implementation of the law Net Metering
- UTILITIES LOBBYING FOR CHANGE
- INDUSTRY LOBBYING EFFORTS

Iowa Action

- Iowa acted early and often to adopt policies to encourage renewable energy
 - Alternate Energy Production Law (1983, as amended) (Iowa Code
 - § 476.41 et. seq.)
 - Requires IOUs to interconnect with and purchase from AEPs at avoided cost
 - Includes net metering option (500 kW individual capacity limit)
 - Includes an RPS of sorts (105 MW combined obligation)
 - Amended at utilities' request to allow utilities to build alternate generation
 - Advanced Ratemaking Principles (1983, as amended) (lowa Code § 476.53)
 - Applies to new/significantly altered 200+ MW baseload generating facilities and utility-owned or purchased renewable energy generation
 - Approval in advance of the ratemaking principles that will apply when generation goes into base rates
 - E.g., jurisdictional allocation, accounting for environmental credits/wholesale revenues, depreciation, ROE, cancellation cost recovery

Iowa Action (cont'd)

- Renewable Electric Generation Law (2011) (lowa Code § 476.53A)
 - Specifically states that the State's intent is to encourage development of renewable electric power generation, to encourage the use of renewable power to meet local electric needs and to develop transmission capacity to export lowa-generated wind power
- IUB Rules for Interconnection of Distributed Generation (2010) (199 lowa Admin. Code Ch. 45, as amended)
 - Some expedited review possible
 - Differing levels of review, depending upon size of the facility

Iowa Action (cont'd)

Other Laws Designed to Encourage Development of Alternate/Renewable Energy

Iowa Code § 476.47	Customer Contributions to AEP Development
Iowa Code § 476A	Generation Siting Exemption for Small (< 25MW) Facilities
Iowa Code § 476.48	Small Wind Innovation Zones
Iowa Code § 476.46	Alternate Energy Revolving Loan Program
Iowa Code Ch. 564A	Solar Access Easements
Iowa Code § 427.1(29)	Property Tax Exemption - Methane Gas Conversion Property
Iowa Code § 427B.26	Special Property Tax Valuation and Assessment - Wind Energy Conversion Property
Iowa Code § 441.21(8)	Property Tax Exemption - Renewable Energy Systems
lowa Code §§ 437A.6 , 437A.3(27)	Replacement Tax Exemptions - Methane Gas Conversion Property, Large Hydro Facilities, Self-Generators and Wind Energy Conversion Property
Iowa Code §§ 423.3(54), (90)	Sales Tax Exemptions - Wind Energy Conversion Property & Solar Energy Equipment
Iowa Code §§ 476B, 476C	Wind Energy Tax Credit; Renewable Energy Tax Credit

Primary Drivers of RE Growth in Iowa

- Changes to law to allow utilities to construct renewables and recover cost fromcustomers
- 2. Tax Incentives

Primary Reasons for Slow Independent Renewable Energy Growth

- 1. Low avoided cost purchase rates
- 2. Difficult/costly interconnection process
- 3. Tariff issues (limits on size and timing)

What's Ahead at the Federal Level?

- Clean Power Plan EPA Rules on Appeal
- **Other Judicial Action Pending** Wholesale power implications of distributed generation.
- In Congress Bipartisan Energy Bill "Energy Policy Modernization Act of 2015" S. 2012 Sponsored by Lisa Murkowski (R-Alaska) and Maria Cantwell (D-Washington)

What's Ahead in Iowa?

- IUB'S Avoided Cost Investigation Docket No. INU-2014-0001
 - The subject of several IUB proceedings over the years
 - Energy Efficiency Plan proceedings for the IOUs
 - Review of tariffs for qualifying facilities (QFs) filed by the IOUs
 - EEP parties in settlements were able to reach a temporary agreement on avoided costs
 - No consensus has ever been reached on QF avoided cost issues
 - Initiated on April 22, 2014
 - IOUs to provide information on their avoided cost methodologies confidentiality protected
 - Each IOU required to organize a workshop on its avoided cost methodology

IUB'S Avoided Cost Investigation

- Workshops held on June 6 and 7, 2014 to further educate parties on the models
- Board staff and stakeholders interacted with utility staff familiar with economic models and methods of determining avoided cost
- Workshops followed by a round of questions from stakeholders and responses from utilities
- Status
 - Staff has completed review of extensive materials obtained from the workshops and will prepare report for the IUB
 - IUB will then decide what additional steps are needed, such as additional rounds of questions or workshops
- Prognosis

IUB's Distributed Generation Investigation – Docket No. NOI-2014-0001

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- Grew out of EEP proceedings debate whether utilities should have incentive-based renewable energy programs
- Initiated January 7, 2014, in recognition of the response to increasing interest in Solar PV, CHP, biomass, and other forms of distributed generation
- Purpose to consider the technical and policy issues associated with potential widespread use of DG. Goal to determine extent of interest, existence of opportunities and barriers, existence and extent of consumer protection, safety and/or interconnection issues, and IUB's role in dealing with any such issues
- Working definition: Generation fueled by renewable or fossil-fuel sources built in order to serve load located at or near the generator and capable of delivering power to a utility's distribution system
- So far, 3rounds of comments on questions presented by the IUB

IUB's Distributed Generation NOI

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- First round areas of inquiry were general intended to identify further areas for specific inquiry
 - Benefits/challenges of DG for utilities and ratepayers
 - Whether they differ for utility-owned DG vs. customer-owned DG
 - What state/IUB policies should be examined in connection with DG
 - What other topics should the IUB examine (technological, financial, regulatory, safety, etc.)
 - Comments received from 170 diverse respondents (utilities, utility associations, environmental groups, renewable energy advocates, energy-related organizations, businesses, and individuals)
 - Comments covered a wide range of topics (e.g., net metering, interconnection, safety and reliability, financial issues, feed-in-tariffs, incentives, permitting, consumer protection, utility planning, etc.)

• IUB's Distributed Generation NOI

- Second and third round areas of inquiry more focused
 - Net metering (excluding avoided cost and standby rates considered in other proceedings)
 - Interconnection (to include safety, reliability and customer awareness of DG)
 - Rate Issues
 - IUB Order of October 2015 asked for pilot projects
- Current Status
 - Three Pilots Filed --MidAmerican Energy, Interstate Power and Winnesheik Energy
 - Utilities' pilots -- Community Solar Garden, Storage and Rate Changes
 - Winnesheik off-site solar array, virtual net metering, larger customer eligibility
- Prognosis new dockets, collaboration process

- New Iowa Energy Plan Development (<u>http://www.iowaenergyplan.org/index.html</u>)
 - Led by IEDA and DOT
 - Described as:

"a means to set state priorities and provide strategic guidance for decision-making while working to encourage energy, economic, and environmental benefits through the goals and recommendations it sets forth. It will include an assessment of current and future energy supply and demand, examine existing energy policies and programs, and identify emerging energy challenges and opportunities. The plan will synthesize the existing state energy goals and strategies that are beneficial for the state, as well as an outline, new goals, and strategies to position lowa for the future"

- Working Groups Formed: Economic development and energy careers

Iowa's energy resources Transportation and infrastructure Energy efficiency and conservation

- Public Forums to be held over the next several weeks
- Prognosis

Other Developments

- Iowa Supreme Court decision in <u>SZ Enterprises, LLC v. Iowa Utilities Board</u>, No. 13-0642 (July 11, 2014)
- New Complaint at IUB flowing from SZ Enterprises: <u>Eagle Point Solar v. Interstate Power & Light</u> <u>Company</u>, Docket FCU-2015-0009
- Transmission line projects (MVP and Clean Line (potential federal involvement))

All have the potential to expand DG, in particular solar and wind generation

For a listing of major federal energy legislation from 1920 – 2009 see: <u>https://www.e-education.psu.edu/geog432/node/116</u>

Other Resources:

- 1. Iowa Utilities Board: https://iub.iowa.gov/
- 2. Iowa Energy Plan: http://www.iowaenergyplan.org/
- 3. American Wind Energy Association: http://www.awea.org/
- 4. Iowa Wind Energy Association: http://www.iowawindenergy.org/
- 5. Iowa Solar Energy Trade Association: http://www.iowaseta.org/