IOWA ENERGY PLAN

APPENDIX F:
Energy Policy Inventory

Collaborate locally.
Grow sustainably.
Lead nationally.

IOWA ENERGY PLAN IS A JOINT INITIATIVE BETWEEN

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Prepared by Elevate Energy with Support from Inova Energy Group

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ENERGY POLICY INVENTORY

Iowa has a substantial body of law and regulation that impacts how energy is generated, distributed, transmitted and used in the state. To assist the Iowa Economic Development Authority in administering the energy planning process, Elevate Energy, a nonprofit focused on smarter energy use for all and member of the Inova Energy Group team, created an inventory of Iowa's existing energy use policies, goals and strategies. The identification of policies included in the inventory was guided by a review of the Iowa Code and Administrative Rules and by related discussions with state agencies, working group members, and the public.

The inventory is divided into State policies (Table 1) and federal policies (Table 2). Since Iowa has a large number of energy policies, some policies have been grouped together to keep the length of the inventory manageable. This inventory has been used as a baseline to shape the strategies recommended throughout the Iowa Energy Plan.

Table 1. State Energy-Related Policies and Programs

No.	Policy Name	Description / Highlights	Date of Enactment / Effectiveness	Responsible Agency	Eligible Technologies	Applicable Sectors	Policy Type	Authority (Statute)	Authority (Rule)	Authority (Other)	Active Docket or Program Website
1	Alternative Energy Law	The Alternative Energy Production law requires MidAmerican Energy and Interstate Power and Light to own or to contract for a total of 105 megawatts (MW) of renewable generation, at rates set by the Iowa Utilities Board (IUB).	1/1/83	Iowa Utilities Board	Solar, Wind, Small Hydroelectric, Biomass, Municipal Solid Waste, Landfill Gas, Anaerobic Digestion	Investor-Owned Utilities	Renewable Portfolio Standard	Iowa Code §§ 476.43, 476.44	199 IAC 15.11(1)		
2	Interconnection Standards	Interconnection standards for rate-regulated utilities apply to distributed generation facilities of up to 10 MW that are not subject to the interconnection requirements of the Federal Energy Regulatory Commission (FERC), the Midwest Independent Transmission System Operator, Inc. (MISO), or the Mid-Continent Area Power Pool (MAPP). A distributed generation facility includes qualifying facilities (QFs) under the U.S. Public Utilities Regulatory Policy Act (PURPA) and alternative energy production (AEP) facilities, which are electricity generation facilities that derive at least 75% of their energy input from solar, wind, waste management, resource recovery, refuse-derived fuel, agricultural crops or residues, or wood burning, as well as dam-based hydroelectric facilities. HF 548 (passed in 2015) provided new rules on safety, specifically the visibility of a disconnect device.	5/1/10	Iowa Utilities Board	Solar, Wind, Hydroelectric, Biomass, Geothermal, Municipal Solid Waste, Landfill Gas, Anaerobic Digestion, Combined Heat and Power (CHP)	All Customers, Investor-Owned Utilities, Linn Co. Renewable Electricity Co-op	Regulation	Iowa Code § 476.6(A)	199 IAC 15.10 199 IAC 45	H.F. 548	Docket No. NOI-2014-0001
2.1	Safety of Distributed Electric Generation Facilities	The bill requires the IUB to adopt administrative rules requiring distributed generation facilities installed after the effective date to have a disconnection device that is easily visible and adjacent to the electric meter. Customers must also notify local fire departments of the location of the distributed generation facility and associated disconnection device.	7/1/15	Iowa Utilities Board	DG	All customers	Regulation	HF 548			

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3	Net metering	Iowa's statutes do not explicitly authorize the IUB to mandate net metering, but this authority is implicit through the board's enforcement of PURPA and Iowa Code § 476.41 et seq. Iowa's net-metering sub rule, adopted by the IUB in July 1984, applies to customers that generate electricity using alternate energy production facilities. Net metering is available to customers of Iowa's two investor-owned utilities, MidAmerican Energy and Interstate Power and Light (IPL). MidAmerican Energy and IPL limit individual systems to 500 kilowatts (kW). Customers that have an on-site renewable energy system through an existing third-party power purchase agreement are not eligible for net metering. IPL also limits net metering to customers on the Residential, Farm, or General Service rate schedules, so customers on the Large General Service rate schedule (i.e., customers using more than 20,000 kWh per month) are ineligible to net meter. The IUB has docketed two new net metering tariffs, filed by MidAmerican Energy and IPL, in Docket Nos. TF-2016-0321 and TF-2016-0323.	7/1/84	Iowa Utilities Board	Solar, Wind, Hydroelectric, Biomass, Municipal Solid Waste	All Customers, Investor-Owned Utilities	Net Metering	Iowa Code §476.41-476.45	199 IAC 15.11(5)	PURPA (1978)	NOI-2014-0001
4	Alternative Energy Revolving Loan Program (AERLP)	The AERLP provides low-interest loans to individuals and organizations that seek to build renewable energy production facilities in Iowa. Successful applicants receive a low-interest loan that consists of a combination of AERLP and lender-provided funds. The AERLP provides 50% of the total loan at 0% interest rate up to a maximum of $1,000,000. Rural electric cooperatives and municipal utilities are limited to one loan every two years with a maximum loan of $500,000. The remainder of the loan is provided by a lender at market rate.	1/26/96	Iowa Energy Center	Solar, Wind, Hydro, Biomass, Landfill Gas	All Customers, All Utilities	Loan Program	Iowa Code § 476.46			

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5	Lease purchase agreements	Iowa's Treasurer's office offers the ability for state agencies to use lease purchase agreements to purchase energy related equipment. Requires aggregate payback of <6 years	1980s	State Treasurer	n/a	State agencies	Financing	Iowa Code §12.28			
6	Advanced ratemaking procedures	In determining the applicable ratemaking principles, the board shall not be limited to traditional ratemaking principles or traditional cost recovery mechanisms. Among the principles and mechanisms the board may consider, the board has the authority to approve ratemaking principles proposed by a rate-regulated public utility that provide for reasonable restrictions		Iowa Utilities Board	n/a	Investor-owned utilities	Regulation	Iowa Code §476.53			
7	Energy assurance planning	Every two years, Iowa prepares a state energy assurance plan to address the protection of its critical energy infrastructure. Responsibility for this plan is shared between the IUC, the State Energy Office at the Iowa Economic Development Authority (IEDA), and the Department of Homeland Security and Emergency Management.		IUB, IEDA, Dept. of Homeland Security, others.	n/a		Regulation	Iowa Code §§ 473, generally.			
8	Renewable Energy Production Tax Credit	Iowa has two production tax credit programs for renewable energy facilities. An eligible facility can qualify for only one of the two credits: (1) $0.015/kWh for facilities of less than 60MW nameplate capacity (IA Code § 476C) or, (2) $0.01/kWh for 2-30 MW facilities or smaller facilities at schools and hospitals (IA Code § 476B). The tax credit lasts for 10 years after facility begins producing energy.	6/15/05	Iowa Utilities Board	Solar, Wind, Hydroelectric, Biomass, Municipal Solid Waste, Landfill Gas, Anaerobic Digestion, CHP, Hydrogen	Commercial, Industrial, Agricultural Customers	Corporate Tax Credit	Iowa Code §§ 476B, 476C.	199 IAC 15.18 - 15.21	701 IAC 42.27	
9	Sales Tax Exemption - Renewable Energy Equipment	Iowa exempts solar, wind, and hydroelectric equipment from the state sales tax, which is 6%.	Wind - 1993, Solar 7/1/2006, Hydro - 2013	Iowa Department of Revenue	Solar, Wind, Hydroelectric	All Customers	Sales Tax Exemption	Iowa Code §§ 423.3(54)(wind and hydro); 423.3(90)(solar)			

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10.1	Geothermal Tax Credit	Geothermal heat pumps installed on residential property in Iowa are eligible for a tax credit equal to 10% of the expenditures on geothermal heat pump equipment in the given year. Credit in excess of the tax payer's liability may be carried forward for up to 10 years. The credit applies to systems installed beginning Jan. 1, 2017.	1/1/17	Iowa Department of Revenue	Geothermal heat pumps	Residential	Personal Tax Credit	Iowa Code § 422.10A	701 IAC 42.47		
10.2	Solar Energy System Tax Credit	Individuals and corporations may claim a state tax credit worth 60% of the Federal Investment Tax Credit, which is set at 30% of installed costs (60% * 30% = 18%). Each taxpayer may claim up to $5,000 for residential systems and $20,000 for commercial systems, and excess credits may be carried over for up to 10 years. The total amount of tax credit is limited to $4.5 M / year, with $1 M reserved for residential systems.	1/1/12	Iowa Department of Revenue	Solar	Commercial	Corporate Tax Credit, Personal Tax Credit	Iowa Code § 422.11L	701 IAC 42.48		
11.1	Local Option - Special Assessment of Wind Energy Devices	Any city or county in Iowa may pass an ordinance assessing wind energy conversion equipment at a special valuation for property tax purposes, beginning at 0% of the net acquisition cost in the first assessment year and increasing annually by five percentage points to a maximum of 30% of the net acquisition cost in the 7th and succeeding years.	1/1/94	Iowa Department of Natural Resources	Wind	All Customers	Property Tax Incentive	Iowa Code § 427B.26	701 IAC 80.13		
11.2	Cogeneration Replacement Tax Exemption	New cogeneration facilities are exempt from replacement tax by means of a credit.	1/1/10	Iowa Department of Revenue / Local Assessors	Electric Cogeneration Facilities	Commercial	Corporate Tax Credit	Iowa Code § 437A.16A			

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11.3	Energy Replacement Generation Tax Exemption	Iowa exempts self-generators, landfill gas, and wind from a replacement generation tax of $0.0006 per kilowatt-hour (kWh) on electricity generated within the state. This tax is imposed in lieu of a property tax on generation facilities. There is a reduced rate for large hydroelectric.	2008	Iowa Department of Revenue	Wind, Hydroelectric, Landfill Gas	Electric Generators	Corporate Tax Exemption	Iowa Code § 437A.6			
11.4	Methane Gas Conversion Property Tax Exemption	Iowa exempts methane gas conversion property from property tax. Projects may claim the exemption for 10 years, except projects at publicly-owned sanitary landfills.	1/1/2008 (retroactive)	Iowa Department of Revenue	Biomass, Landfill Gas, Anaerobic Digestion	All Customers	Property Tax Incentive	Iowa Code § 427.1(29)			
11.5	Property Tax Exemption for Renewable Energy Systems	The market value added to a property by a solar or wind energy system is exempt from Iowa property tax for five full assessment years.	1/1/78	Iowa Department of Revenue	Solar, Wind	All Customers	Property Tax Incentive	Iowa Code § 441.21(8)			
12	Energy Bank Revolving Loan Program	IEDA in partnership with the Iowa Area Development Group (IADG) offers Iowa businesses and industries a low-interest financing option for energy efficiency improvements, renewable energy projects, energy management, and implementation plans. The establishment of the IADG Energy Bank Revolving Loan Fund is intended to provide an ongoing source of low interest financing for the implementation of cost-effective projects that will save energy and money, improve facilities and processes, and enhance job creation and profitability.	2013	IEDA, IADG	Solar, Wind, Hydroelectric	Commercial, Industrial	Loan Program			ARRA	IADG Program
13	Mandatory Utility Green Power Option	All Iowa-based electric utilities must offer green power options that allow customers to make voluntary contributions to support the development of renewable energy sources in Iowa. Utilities must file program plans and tariffs with the IUB; however, the filings for non-rate-regulated utilities are intended to be for informational purposes only.	1/1/04	Iowa Utilities Board	Solar, Wind, Hydroelectric, Biomass, Municipal Solid Waste	All Utilities	Regulation	Iowa Code § 476.47			

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14	Small Wind Innovation Zone Program and Model Ordinance	In May 2009 the Iowa Legislature created the Small Wind Innovation Zone Program, which allows any city, county, or other political subdivision to create small wind innovation zones that promote small wind production. In order to qualify for the designation, the city must adopt the Small Wind Innovation Zone Model Ordinance and also establish an expedited approval process for small wind energy systems. System owners must also enter into a model interconnection agreement with an electric utility.	5/1/09	Any sub-division of the State (i.e. city, county, township)	Wind	All Utilities	Regulation	Iowa Code §476.48	199 IAC 15.22		
15	Solar Easements	Iowa's solar access easement provision allows for access to sunlight to operate a solar energy system. Those who are unable to obtain a voluntary solar easement from a property owner may apply to the solar access regulatory board for an order granting a solar access easement if the relevant city council or county board of supervisors has created such a board. If a board does not exist, the matter is referred to the local district court. Iowa code also grants municipalities the right to issue ordinances prohibiting subdivisions from including restrictive covenants that limit the use of solar collectors.	1/1/00	Solar access regulatory board (if applicable) or local district court	Solar	All customers	Regulation	Iowa Code § 564A			
16	Electric Generation Facility Certificate	Iowa's code and Administrative rules contain provisions for determining if and where electric generation facilities may be built by regulated utilities in Iowa.	1977	Iowa Utilities Board	Wind, Solar	Electric utilities	Regulation	Iowa Code §§ 476A	199 IAC 24.1 et seq		

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17	Renewable Fuel Standard (RFS)	In 2006, Iowa adopted the most aggressive RFS in the country. The RFS requires 25% of motor fuel sold in Iowa to be replaced with biofuels (ethanol or biodiesel) by January 1, 2020. Beginning in 2009, retailers that meet the RFS schedule, which requires them to sell a certain percentage of renewable fuels as part of their total gasoline sales, will be eligible for an ethanol promotion tax credit.	Enacted 2006; Effective 2009	Dept. of Revenue (collects reports)	Biodiesel, Ethanol	Commercial	Regulation	Iowa Code 452A.33	701 IAC 67.27	HF 2754	
18	Renewable Fuels Infrastructure Program	Reimbursement can be for 50% of the costs for specific components of a project with a three-year commitment required to sell certain renewable fuels. A five year commitment to store and sell renewable fuels and install certain equipment can result in up to 70% reimbursement for specific equipment or installation costs	Enacted 2005; Effective 2006	Iowa Department of Agriculture and Land Stewardship (IDALS), IEDA	Biodiesel, Ethanol	Commercial (Retail)	Grant program	Iowa Code §159A.15			
19	Sales Tax Exemption - Energy	Iowa exempts electricity, natural gas, and metered fuels such as propane and heating oil, from the state sales tax, which is 6%.	Phased in fully in 2006	Iowa Department of Revenue	n/a	Residential Customers	Sales Tax Exemption	Iowa Code § 423.3(84)			
20	Gas Tax	Raises the state's fuel tax and provides, but provides a partial (3 cent) exemption for biodiesel blended fuel classified as B-11 or higher	Enacted 2/25/2015; Effective 3/1/2015	Department of Transportation	Biodiesel	All Customers	Tax	Iowa Code §452A.3		SF 257	
21	Biobutanol Extension	A bill for an act relating to renewable fuels, by providing for biobutanol and biobutanol blended gasoline, modifying the rate of the E-15 plus gasoline promotion tax credit and extending provisions for a biodiesel production refund, and including effective date and retroactive applicability provisions. (Formerly SF 2333.)	5/21/2014; Expires 2017 & 2018	IDALS	Biodiesel (Specifically Biobutanol)	Transportation	Tax Credit/Refund	Iowa Code §159.A, 214, 422.11	701 IAC 42.46	SF 2344	
22	Fuel Mix and Emissions Disclosure	Rate-regulated electric utilities must annually disclose the fuel mix of its electricity production and the associated sulfur dioxide, nitrogen oxide, and carbon dioxide emissions.	1/1/04	Iowa Utilities Board	n/a	All Utilities	Regulation		199 IAC 15.17(5)		

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23	Underground storage tanks	Iowa Department of Natural Resources (DNR) regulates underground storage tanks to prevent and detect leaking.	1985	Department of Natural Resources	biofuels		Regulation	Iowa Code §§455B.471-488			IA DNR UST Resources Page
24.1	State-owned vehicle assignments	Vehicles are assigned to maximize the average passenger miles per gallon.		All Iowa State Agencies	Energy Efficiency	State Government	Regulation	Iowa Code §§ 8A.361, 8A.362	11 IAC 103.4		
24.2	State-owned vehicle fuel economy requirements	State vehicle fleet purchases must meet or exceed average fuel economy for the relevant model year.		Department of Administrative Services	Energy Efficiency	State Government	Regulation	Iowa Code § 8A.362			
24.3	State-owned vehicle fueling	Users of state-owned vehicles are required to use gasahol, and drivers of flex-fuel vehicles are required to use E85 unless it is unavailable, in which case they should not fill the tank more than necessary to reach an E85 station. Agencies using biodiesel vehicles must to use biodiesel whenever available.		All Iowa State Agencies	Biofuels	State Government	Regulation	Iowa Code § 8A.362	11 IAC 103.16		
25	Emergency energy regulation, including fuel reservations	IEDA has authority, on the President's or Governor's emergency proclamation, to regulate the distribution of energy supplies.	1986	IEDA, IDALS	biofuels	All sectors	Regulation	Iowa Code §§473.8-10			
26	Emergency regulation waivers	The Governor may waive the hours of service requirements for truck drivers in case of an emergency, such as a propane or liquid fuel shortage or pipeline disruption. The decision must be made in consultation with IDALS and other agencies. Also, the Governor may waive air quality regulations preventing older generators from being used in case of an emergency. The decision must be made in consultation with others, including U.S. EPA.	1981	Governor's Office, in consultation with IDALS and other agencies.	Biofuels	All sectors	Regulation	Iowa Code §29C.6			
27	Utility Energy Efficiency Standard	The IUB approves and oversees electric and natural gas energy savings standards for rate-regulated utilities. Municipal and cooperative utilities file energy efficiency plans. All utilities submit annual reports to the IUB. Iowa Code § 476.63 requires consultation with IEDA.	Various	Iowa Utilities Board	Various energy efficiency measures	All utilities	Energy Efficiency Standard	Iowa Code §§ 476.6 (13, 17)	199 IAC Chapters 35 and 36		

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28	Building Energy Code	The State Building Code Commissioner adopts rules via the Building Code Advisory Council and in consultation with the Economic Development Authority. Effective June 1, 2014, the 2012 International Energy Conservation Code (IECC) was adopted as the code for commercial and residential buildings with some amendments. Iowa is in the process of considering adoption of the 2015 IECC.	IA Code: 2006 2012 IECC adopted in 2014.	Iowa State Building Commissioner	n/a	Residential, Commercial	Building Energy Code	Iowa §§ Code 103A et seq.			IA Department of Public Safety's Building Energy Codes Summary
29	Building Energy Management Program and Fund	IEDA provides technical assistance and financing to state and local government, schools, and nonprofits to help them reduce energy consumption or costs or use renewable and alternative energy.	1986	IEDA	Solar, Wind, Hydroelectric, Biomass, Municipal Solid Waste, Landfill Gas, Anaerobic Digestion, CHP, Hydrogen	State Government	Regulation, Loan Program	Iowa Code §§ 473.19, 473.19A			
30	B3 Public Building Benchmarking Program	A voluntary program that aims to identify buildings that are the best candidates for energy audit investigations and cost-effective improvements and to manage energy consumption over time. Currently, the program serves over 2000 public buildings in Iowa cities, counties, public schools, community colleges, higher education, and state agencies	2011	IEDA	Energy efficiency	Public Buildings				ARRA	
31	Weatherization Assistance Program	The Iowa Department of Human Rights administers federal funds and funding from utilities to local agencies who provide weatherization services, training and guidance.	1980	Iowa Department of Human Rights	Energy efficiency	Residential	Assistance Program				Iowa Dept of Human Rights WAP Summary
32	Low-Income Home Energy Assistance Program (LIHEAP)	Iowa allows 15% of federal LIHEAP funds to be used for weatherization.	1981	Iowa Department of Human Rights	n/a	Residential Customers	Assistance Program				IA Department of Human Rights LIHEAP Summary Page

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33	Energy efficient lighting requirement	All public utility owned exterior flood lighting shall be as energy efficient as high pressure sodium lighting or better.	1989	Iowa Utilities Board		Public Utilities	Regulation	Iowa Code § 476.62	199 IAC 36.8		
34	Purchasing requirements for energy-consuming products	Life cycle cost and energy efficiency must be included in purchasing criteria for the Department of Administrative Services and institutions under the control of the Board of Regents, IA Department of Transportation, Department for the Blind, and other state agencies.	2003	Dept. of Administrative Services, Board of Regents, Dept. of Transportation, Dept. for the Blind	n/a	State Government	Regulation	Iowa Code § 8A.311(19)			
35	Qualified Allocation Plan for LIHTC Properties	Iowa's Finance Authority allocates Low Income Housing Tax Credits using criteria in its Qualified Allocation Plan (QAP), which is updated annually. Iowa's QAP includes a number of criteria intended to improve the energy efficiency of affordable housing.	2015	Iowa Finance Authority	Energy efficiency	Affordable Housing Developers	Regulation			Final 2016 IA QAP	
36.1	Peak Load Energy Conservation	The IUB is allowed to promulgate rules to require or authorize a public utility to establish peak load management procedures.		Iowa Utilities Board	n/a	Public Utilities	Regulation	Iowa Code § 476.17	199 IAC 20.11		
36.2	Customer notification of peaks in electricity demand	Electric utilities must formulate and implement plans, educate customers, and report on efforts to reduce peak demand.	5/20/15	Iowa Utilities Board	n/a	Utilities	Regulation	Iowa Code § 476.17	199 IAC 20.11		
37	Energy City Designation Program	IEDA can designate Energy Cities as a means of encouraging cities to develop and implement innovative energy efficiency programs.	2007	IEDA	Various energy efficiency measures	State Government	Regulation	Iowa Code § 473.41			
38	Performance Contracting	At a minimum, it is not clear that Iowa's procurement laws allow its state agencies to use performance contracting for energy efficiency projects.	Various	Department of Administrative Services	n/a	State agencies	Regulation		11 IAC 117-120		

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39	On-Bill Financing (OBF)	No statewide legislation exists to require or otherwise structure an OBF program; however certain utilities are implementing on their own. Iowa code 476.6 gives the IUB the authority to require regulated utilities to offer financing for cost-effective energy efficiency improvements	Bloomfield Pilot implemented 10/7/2015	Currently: Utilities; Future: Iowa Utilities Board	Energy efficiency	All Customers	Financing	Iowa Code §476.6			
40.1	Electric transmission lines	Iowa's Code and Administrative rules contain provisions for the ownership and construction of electric transmission lines, with particular provisions related to crossing railroads and roads and eminent domain.	Various	Iowa Utilities Board	n/a	Utilities	Regulation	Iowa Code §§ 478.1 et seq	199 IAC 11 et seq.		
40.2	Eminent Domain for electric transmission	Takings under eminent domain require a public hearing with written notice prescribed by the IUB. The IUB grants powers of condemnation as needed when granting a franchise. There are restrictions on condemning homestead sites, cemeteries, orchards, and schoolhouses for purposes of erecting electric substations. If unused, the right of way reverts to the owner of the property from which the right of way was taken.	2000	Iowa Utilities Board	n/a	Utilities	Regulation	Iowa Code §478.6, §478.15			
41.1	Pipelines and underground natural gas storage	Pipelines and Underground gas storage in Iowa are regulated by the IUB. The IUB must approve construction and land restoration and oversees safety conditions of these facilities. The IUB also may grant imminent domain rights in a process similar to electric transmission lines.	1988	Iowa Utilities Board	n/a	Natural Gas Suppliers	Regulation	Iowa Code §§ 479.1 et seq			
41.2	Eminent Domain for natural gas pipelines	The IUB may grant imminent domain rights in a process similar to electric transmission lines.	1995	Iowa Utilities Board	n/a	Natural Gas Suppliers	Regulation	Iowa Code § 479.24			
42	Interstate natural gas pipelines	The IUB may act as agent for the federal government in determining compliance with interstate natural gas pipeline standards within the boundaries of Iowa.	2005	Iowa Utilities Board	n/a	Interstate Natural Gas Pipelines	Regulation	Iowa Code §§ 479A.1 et seq			

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43.1	Hazardous Liquid Pipelines and Storage Facilities	Hazardous liquids are defined to include various petroleum products, coal slurries, anhydrous ammonia, liquid fertilizers, and liquefied carbon dioxide. Hazardous Liquids Pipelines and Underground gas storage in Iowa are regulated by the IUB. The IUB must approve construction and oversees safety conditions of these facilities. The IUB also may grant imminent domain rights in a process similar to electric transmission lines.	1995	Iowa Utilities Board	n/a	Hazardous Liquid Pipelines	Regulation	Iowa Code §§ 479B.1 et seq	199 IAC 13.1 et seq		
43.2	Eminent Domain for hazardous liquid pipelines	The IUB also may grant imminent domain rights for hazardous liquids pipelines in a process similar to electric transmission lines.	1995	Iowa Utilities Board	n/a	Hazardous Liquid Pipelines	Regulation	Iowa Code §479B.16			
44	Sovereign Lands Permitting Authority	The Iowa DNR is responsible to manage construction activities on state-owned or –managed lands, and may grant easements to utilities.	Various	Department of Natural Resources	n/a	Utilities, Pipeline Developers	Regulation	Iowa Code §§461A.4, 461A.25			
45	State Revolving Fund	The Fund provides financial assistance to public water systems (Drinking Water Revolving Loan Fund) and wastewater systems (Clean Water Revolving Loan Fund) for the design and construction of facilities to ensure public health and the provision of safe and adequate drinking water.	1988	Department of Natural Resources	n/a	Various	Regulation	Iowa Code §§455B.291-299	567 IAC 44	Clean Water Act	

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46	Water Permitting (Ethanol Plants)	Permits required include those for water withdrawal, well siting and construction, water treatment plant construction and water system operation. Additionally, an operator of the system must meet state certification requirements. Well siting requires an on-site survey of the area, which can take 1-2 weeks. The water withdrawal permit requires 45 to 60 days, because public notification is required during that permitting process. Once the design and specifications of the project (including a completed viability assessment) are submitted by a professional engineer licensed in Iowa, the construction permit is routinely issued within 1-2 weeks. After the system is constructed and inspected, the operation permit is typically issued within 1-2 weeks.	1985; various additions & updates	Department of Natural Resources	Ethanol	Manufacturing	Regulation	Iowa Code 455B.263	567 IAC 52.10		Water Rights & Planning Allocation - 2010
47	Renewable Chemical Production Tax Credit	A 5 cent per pound tax credit designed to encourage producers of ethanol and biodiesel to invest in new technology to extract chemicals from biomass for use in consumer products. An eligible business that has been operation in Iowa for <5 years would could claim a max credit of $1 million. For eligible businesses in operation in the state for > 5 years, the max credit would be $500,000. The legislation specifies no more than $10 million would be allocated to the incentive program in each fiscal year.	April 6, 2016	IEDA	Biochemicals	Renewable Chemical Producers	Tax Credit			SF 2300	
48	Life Cycle Cost Analysis of Public Facilities	Life cycle cost analysis is required in the design phase of construction or renovation of state facilities and must include energy use analysis.	1/1/80	Agency responsible for construction	n/a	State Government	Regulation	Iowa Code §§ 470.1, et. seq.			
49	Physical plant and equipment local levy (PPEL)	The school board may annually certify a regular PPEL in an amount up to 33 cents per thousand dollars of assessed valuation. Voters may authorize a PPEL for a period not exceeding ten years and in an amount not exceeding $1.34 per thousand dollars of assessed valuation.		Department of Education	n/a	Schools	Financing	Iowa Code §298.2-3	IAC Chapters 281-98		

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50	Professional licensing	The State Division of Banking's Professional Licensing Division provides administrative assistance to Boards that control licensing and continuing education requirements of architects, engineers, landscape architects, and real estate appraisers.	Various	Division of Banking	n/a	All sectors	Other		193 IAC 1		
51	Commissions on under-served populations	The Department of Human Rights hosts the following Commissions, who have an interest in energy issues: Commission on the Status of African-Americans, Commission of Asian and Pacific-Islander Affairs, Commission of Deaf Services, Latino Affairs Commission, Commission of Persons with Disabilities, Commission of Native American Affairs, Commission on the Status of Women.	Various	Department of Human Rights	n/a	All sectors	Other				Links to Commission web pages
52	Wildlife takings	The DNR is responsible for regulating takings of threatened and endangered species and other wildlife, including migratory waterfowl, under a variety of state and federal laws. This could affect any siting of energy-related infrastructure, both above and below ground.	Various	Department of Natural Resources	n/a	Utilities, Pipeline Developers	Regulation	Iowa Code §§481A et seq.; Iowa Code §§481B et seq.		Federal Migratory Bird Treaty Act, Endangered Species Act, and Bald Eagle and Golden Eagle Protection Act	
53	Decorative gas lamps	Prohibition against selling decorative gas lamps made before Dec. 31, 1978. Also required an IUB determination that sale was in public interest.	1989	Iowa Utilities Board	n/a	Natural gas suppliers	Regulation	Iowa Code § 478A.7			
54	Assigned Service Territories	The IUB may establish exclusive service territories for electric utilities.	5/30/05	Iowa Utilities Board	n/a	All sectors	Regulation	Iowa Code § 476.25			

Table 2. Federal Energy-Related Policies and Programs

No.	Policy Name	Description / Highlights	Date of Enactment / Effectiveness	Responsible Agency	Eligible Technologies	Applicable Sectors	Policy Type	Authority (Statute)	Authority (Rule)	Authority (Other)	Active Docket or Program Website
1	Clean Power Plan	Establishes state specific interim (2022-2029) and final (2030) emissions reductions goals. Iowa's final goal is 1,283 pounds per MWh. The goals can be achieved via a rate or mass-based compliance plan.	Enacted 2015; Effective 2022	U.S. EPA & Iowa DNR	All	Electric-generating units	Regulation	TBD	Clean Air Act Section 111(d)	CPP Final Rule	U.S. EPA Clean Air Act Summary Page
2	Green Banks Program	Less of a specific program than an initiative, the U.S. Department of Energy (DOE) released a report in December 2015 highlighting Green Bank activities in certain states to illustrate the benefits. DOE plans to launch a webinar series & provide additional resources to assist states in developing Green Banks in 2016. The Global Green Banks Network was announced at COP21	12/7/15; 2016	U.S. DOE	All		Financing				DOE Energy Investment Partnerships
3	Renewable Electricity Production Tax Credit	The federal renewable electricity production tax credit is a per-kilowatt-hour (kWh) tax credit for electricity generated by qualified energy resources.	1992 (enacted). Extended multiple times. Now expires 1/1/17.	Internal Revenue Service	Wind, Geothermal, Biomass, Hydroelectric, Landfill Gas, Waste to energy, Energy efficiency	Commercial, Industrial	Tax Credit				US Department of Energy PTC Summary Page
4.1	Business Energy Investment Tax Credit	30% tax credit for solar, fuel cells, small wind; 10% for geothermal, micro turbines and CHP.	2013 / Extended through 2016	Internal Revenue Service	Solar, Fuel Cells, Wind, Geothermal, CHP	Commercial, Industrial, Utility, Agricultural	Tax Credit	26 USC 48			
4.2	Residential Renewable Energy Tax Credit	A taxpayer may claim a credit of 30% of cost for system serving a dwelling in the U.S.	2005 / Expires 12/31/16.	Internal Revenue Service	Solar, Wind, Geothermal	Residential	Tax Credit	26 USC 25D			US Department of Energy Residential Renewable Energy Tax Credit Summary

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5	Rural Energy for America Program (REAP)	REAP provides financial assistance to agricultural producers and rural small businesses in rural America to purchase, install, and construct renewable energy systems, make energy efficiency improvements to non-residential buildings and facilities, use renewable technologies that reduce energy consumption, and participate in energy audits and renewable energy development assistance. These grants are limited to 25% of a proposed project's cost, and a loan guarantee may not exceed $25 million. The combined amount of a grant and loan guarantee must be at least $5,000 (with the grant portion at least $1,500) and may not exceed 75% of the project's cost. In general, a minimum of 20% of the funds available for these incentives will be dedicated to grants of $20,000 or less. In 2015, a total of $63 million in grants and loans was awarded.	2003	U.S. Department of Agriculture	Solar, Wind, Hydro, Geothermal, Anaerobic digestion, Fuel cells, Microturbines, Energy efficiency	Commercial, Government, Agricultural, Institutional	Grant Program	7 USC § 8107		H.R. 8 (American Taxpayer Relief Act of 2012)	
6	Energy Audit and Renewable Energy Development Assistance (EA/REDA) Program	The REAP EA/REDA Program provides assistance to agricultural producers and rural small businesses for energy audits and renewable energy technical assistance including renewable energy site assessments. Applicants must submit separate applications for assistance, limited to one energy audit and one REDA per fiscal year. The maximum aggregate amount of an energy audit and REDA grant in a Federal fiscal year* is $100,000. In 2015, $2 Million in EA/REDA grant funding is available.	Enacted 2/7/2014; Effective 2015	U.S. Department of Agriculture	n/a	Government, Schools, Agricultural, Institutional, Rural electric co-ops	Grant Program	7 USC § 8107	Agricultural Act of 2014 (Public Law No. 113-79)	H.R. 8 (American Taxpayer Relief Act of 2012)	USDA REDA

No.	Policy Name	Description / Highlights	Date of Enactment / Effectiveness	Responsible Agency	Eligible Technologies	Applicable Sectors	Policy Type	Authority (Statute)	Authority (Rule)	Authority (Other)	Active Docket or Program Website
7	Qualified Energy Conservation Bonds	Taxable bonds issued by State or local units of government for certain "qualified conservation purposes" which include expenditures for: (i) reducing energy consumption in publicly-owned buildings by at least 20%, implementing green community programs, the production of electricity from renewable energy resources in rural areas, certain qualified facilities for electricity produced from renewables (wind, biomass, solar, landfill); (ii) research to develop cellulosic ethanol or non-fossil fuels, carbon capture and sequestration, increased efficiency of fossil fuel production, auto battery technology, energy reduction in buildings; (iii) mass commuting facilities; (iv) demonstration projects to commercialize green building technology, conversion of agricultural waste, advanced battery manufacturing, technologies to reduce peak demand; and (v) public education to promote efficiency	2008	Internal Revenue Service; Iowa Finance Authority	Solar, Wind, Biomass, Geothermal, Hydroelectric, Solid Waste, Landfill Gas, Anaerobic Digestion; Energy efficiency	State Government; Local Government	Loan Program		Iowa Executive Order 27	IRS Notice 2012-44	US DOE QECB Primer
8	Renewable Fuel Standard (RFS)	The RFS is a national policy with the goal of replacing the current amount of petroleum-based transportation fuel, heating oil, and jet fuel with renewable fuels. The long-term goal of RFS is the production of 36 billion gallons of fuel. The current authorization of RFS extends fuel production goals through 2017. Obligated parties are refiners and importers of gasoline or diesel fuel. Compliance is achieved by blending biodiesels/biofuels with standard diesel, or by obtaining credits to fulfill the Renewable Volume Obligation. A Renewable ID Number is generated when a producer makes a gallon of renewable fuel, can be assigned to a specific batch of fuel, and can be traded to meet compliance	2005	U.S. EPA, USDA, DOE	Biomass, Cellulosic Biofuel, Advanced biofuel, Renewable fuels	Commercial, Industrial	Regulation			Energy Policy Act of 2005; CAA; EISA	
9	Corporate Average Fuel Economy (CAFE) Standards	Requires automakers to meet sales-weighted average fuel economy for their new vehicle fleet each year.	1975	U.S. EPA; U.S. DOT	n/a	Automakers	Regulation	49 USC 32902			U.S. DOT Summary of CAFE Proposals

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10	Biorefinery Assistance Program	USDA Rural Development is offering loan guarantees for the development, construction, and retrofitting of commercial-scale biorefineries. Eligible borrowers include individuals, entities, Indian tribes, state or local governments, corporations, farm cooperatives or farm cooperative organizations, associations of agricultural producers, National Laboratories, institutions of higher education, rural electric cooperatives, public power entities, and consortium of any of these types of entities. Financed entities must provide at least 20% of the financing for eligible project costs, and applications for funding must include an independent feasibility study and technical assessment. Eligible project costs include the purchase and installation of equipment, construction or retrofitting costs, permit and licensing fees, working capital, land acquisition, and the costs of financing.	2009	U.S. Department of Agriculture	Biomass, Biofuels, Solid waste, Landfill gas, Renewable chemicals	Commercial, Construction, Utilities, Government, Agricultural, Institutional	Loan Program	7 USC § 8103	7 CFR 4279, Subpart C	H.R. 8 (American Taxpayer Relief Act of 2012)	
11	Repowering Assistance Biorefinery Program	The Repowering Assistance Program provides payments to eligible biorefineries to replace fossil fuels used to produce heat or power to operate the biorefineries with renewable biomass. Reimbursement payments are provided to offset a portion of the costs associated with the conversion of existing fossil fuel systems to renewable biomass fuel systems. Up to 90% of the funds can be utilized during project construction, with the remaining 10% made upon demonstration of successful completion of the project. A maximum of 50% of the total project costs can be reimbursed.	3/14/11	U.S. Department of Agriculture	Biomass, Solid Waste, CHP	Commercial, Construction, Utilities, Government, Agricultural, Institutional	Grant Program	7 USC § 8104		H.R. 8 (American Taxpayer Relief Act of 2012)	USDA Repowering Assistance Program
12	Appliance and Equipment Standards	Provides efficiency standards for over 50 categories of appliances and equipment. Products covered by standards represent about 90% of home energy use, 60% of commercial building use, and 29% of industrial energy use.	1975; various dates for each individual standard.	U.S. DOE	n/a	Appliance and equipment manufacturers	Regulation	42 USC 691 et seq.			U.S. DOE Appliance Standards Program

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13	Fannie Mae Green Initiative	The Fannie Mae Green Initiative provides owners of multifamily properties (5 or more units) with financing solutions and tools to make smart energy- and water-saving property improvements. Its green financing programs include Green Rewards, Green Preservation Plus, and the Green Building Certification Pricing Break, all of which are eligible for a 10 basis points (0.1%) reduction in the all-in interest rate. All Fannie Mae green loans are securitized as Green Mortgage Backed Securities (Green MBS).	2011, 2015	Fannie Mae	Energy efficiency	Multifamily Residential	Loan Program				FannieMae Multifamily Green Initiative
14	Clean Air Act	The Clean Air Act is a landmark law intended to improve and protect air quality in the U.S. Many of the federal rules located elsewhere within this assessment implement the Clean Air Act.	Enacted 1970; Revised 1977 and 1990.	U.S. EPA	n/a	Electric generation	Regulation	Title 42, Ch. 85 U.S. Code			http://epa.gov/air/caa/pdfs/CAA_Nutshell.pdf
15.1	Clean Water Act	The Clean Water Act is a landmark law intended to improve and protect water quality in the U.S. It establishes the basic structure for regulating discharges of pollutants into public waterways.	1972	U.S. EPA	n/a	State government; Electric generation; Water utilities	Regulation	33 USC 1251 et seq.			US EPA Clean Water Act Summary
15.2	Steam Electric Power Generating Effluent Standards	The standards address wastewater discharges from power plants operating as utilities.	1974. Amended multiple times, most recently with a final rule published 11/3/15.	U.S. EPA	n/a	Electric generation		40 CFR 423			US EPA Steam Effluent Guidelines Summary Page
16	Mercury and Air Toxics Standards (MATS)	MATS limits mercury, acid gases and other toxic emissions from power plants of 25 MW or greater.	2011; 2014	U.S. EPA	n/a	Electric generation	Regulation		MATS rule 40 CFR 60 and 63	US EPA MATS Rule Summary	
17	National Environmental Policy Act (NEPA)	Major projects that are performed by a federal agency, receives federal funding, or is subject to federal permitting, are subject to the requirements of the NEPA. Proposed projects must be evaluated based on the need; possible adverse economic, social, and environmental impacts; and governmental environmental goals.	1969	U.S. Council on Environmental Quality; Agencies Implementing Covered Projects	n/a	All	Regulation	42 USC 4321			

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18	Carbon Pollution Standards for New, Modified and Reconstructed Power Plants	Amends the electric generating units New Source Performance Standards for modified and reconstructed facilities for greenhouse gas under Clean Air Act section 111(b). Proposes standards to limit emissions of carbon dioxide from affected modified and reconstructed electric utility steam generating units and from natural gas-fired stationary combustion turbines. Natural gas-fired stationary combustion turbines that supply less than one-third of their potential electric output to the grid are not subject to the rule.	2015	U.S. EPA	n/a	Electric generation	Regulation		40 CFR Parts 60, 70, 71 et al		US EPA Summary Page
19.1	National Ambient Air Quality Standards (NAAQS)	The NAAQS apply to air quality in communities, which are determined to either an attainment area (within the air quality limits) or nonattainment area.	1971. Proposed ozone standards revision November 2014. Revised nonattainment area designations expected to be finalized in 2017.	U.S. EPA	n/a	Electric generation	Regulation		40 CFR 50 NAAQS	US EPA NAAQS Rule Summary	
19.2	Cross State Air Pollution Rule (CSAPR)	This rule requires states to reduce power plant emissions that contribute to ozone and/or fine particle pollution in other states.	2011 / 2015	U.S. EPA	n/a	Electric generation	Regulation				US EPA CSAPR Summary
20.1	Resource Conservation and Recovery Act (RCRA)	RCRA regulates solid waste, underground storage tanks, and hazardous waste.	1976; Amended 1984.	U.S. EPA	n/a	Utilities	Regulation	40 USC 239-282		US EPA RCRA Summary Page	
20.2	Coal Ash Rules	Comprehensive requirements for the safe disposal of coal combustion residuals, commonly known as coal ash.	2014	U.S. EPA	n/a	Electric Generation	Regulation		40 CFR 257, 261		US EPA Coal Ash Rule Summary

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21	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)	Established Superfund and provided Federal authority to respond to contamination by hazardous chemicals that endanger public health.	1980; Amended 1986.	U.S. EPA	n/a	Federal Government; Industrial Customers; Electric and Natural Gas Utilities	Regulation				US EPA CERCLA Summary
22	Combined Heat and Power (Executive Order)	Calls for increased coordination among federal agencies to promote CHP deployment. Sets a goal of 40 GW of new CHP capacity by 2020.	2012	U.S. EPA; U.S. Dept. of Commerce; U.S. Dept. of Agriculture; U.S. Dept. of Energy	Electric cogeneration facilities	Federal Government; Industrial Customers	Regulation			Executive Order	
23	Congestion Mitigation and Air Quality program (CMAQ)	CMAQ funds surface transportation improvements designed to improve congestion and air quality.		U.S. Department of Transportation	n/a	n/a	Regulation				
24	Low-Income Home Energy Assistance Program (LIHEAP) (Federal)	The federal LIHEAP provides funding to states to administer financial assistance programs for utility customers.	1981	U.S. Dept. of Health and Human Services; Missouri Dept. of Social Services	n/a	Low-income households	Assistance Program	2 USC 8621-8630			US HHS LIHEAP Program website
25	Public Utility Regulatory Practices Act (PURPA)	PURPA includes sections that encourage energy conservation and use of domestic energy supply, among other items.	1978	Implementation left to states	n/a	Electricity	Regulation	Pub. L. 95-617			