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URP 620 Energy Planing

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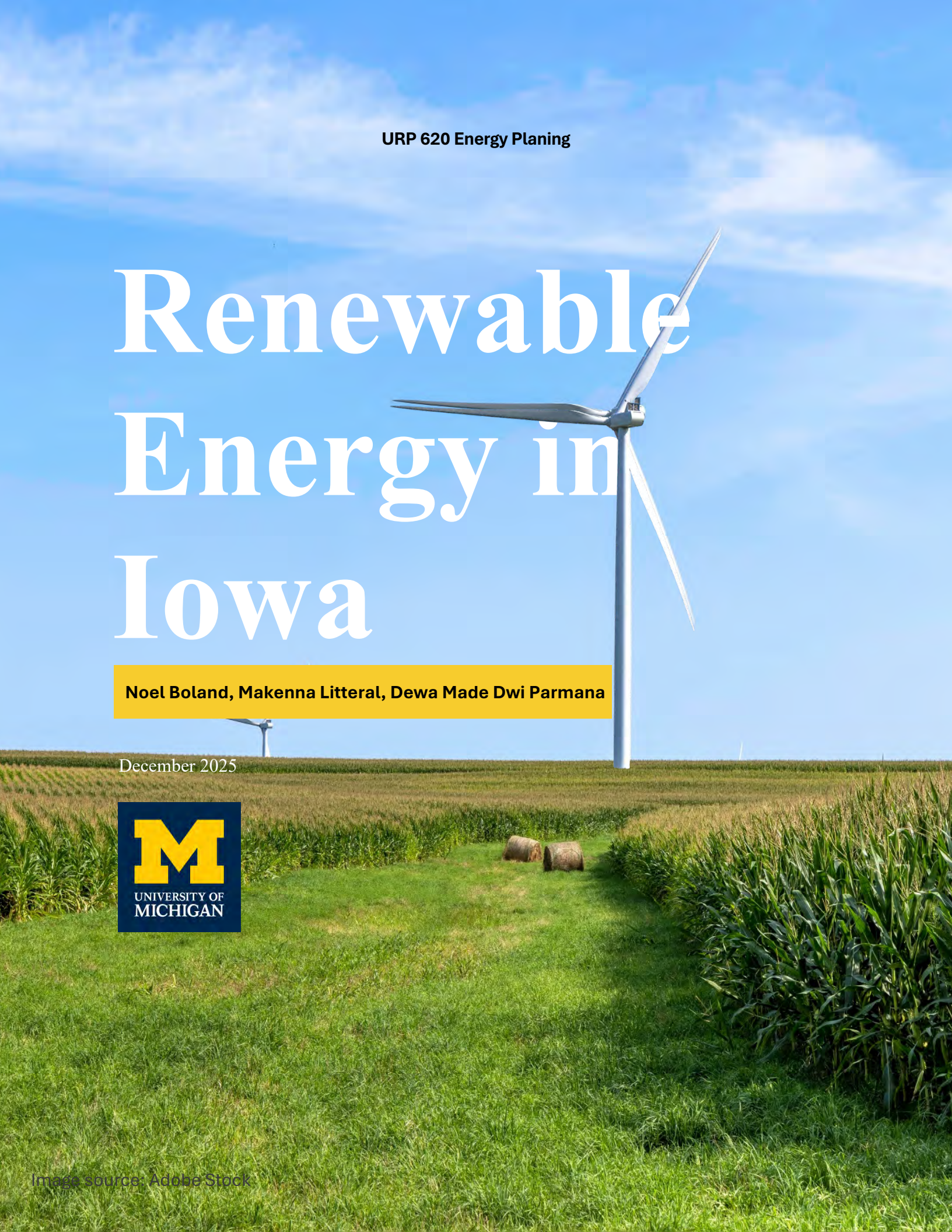

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Abstract

Historically, Iowa has been an energy leader in the United States, producing more energy than the state consumes and exporting the excess. However, this leadership has not been driven by strong or evolving statutory climate mandates, but rather by a state-led initiative to invest in a more resilient grid. Iowa was the first state to develop a Renewable Portfolio Standard (RPS) under the Alternative Energy Production Law in 1983. This legislature functioned more as a foundational policy signal rather than a sustained deployment mechanism, signaling a state-led movement towards renewable development in the 1990s and 2000s. Today, wind energy contributes almost 60% to the total energy generation mix in Iowa. Although Iowa has historically encouraged and continues to promote wind energy development across the state, the mix of energy policy does not address the growing potential for other renewable energy technologies. This report discusses the history of renewable energy generation within the state, the policies that have shaped the current generation landscape, and the policies that are shaping what the future Iowa grid will look like. This report explores the interconnection of state-level tax policy, siting authority, transmission and infrastructure investment, and Public Utility Commission (PUC) policy to analyze the renewable energy recipe enacted by Iowa. Based on the policy framework, Iowa implements a "Friendly Fields" recipe that disregards climate-based policy, allows for local-level siting authority and control, and has tax benefits for local governments that incentivize renewable energy development. Iowa's renewable energy policy framework prioritizes local-level economic development and energy resiliency, but to strengthen this framework, state officials must increase clarity in all policy on non-wind renewable energy, implement tax benefits for non-wind renewable energy, and pursue transmission and infrastructure updates to improve the aging grid. Moving forward, Iowa retains significant room for policy improvement that could better align its abundant renewable resource base with long-term energy system transformation.

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Background

Public Land Use and Demographics

Iowa is in the central Midwest region of the United States. The state's population has increased by 5% over the past decade and the current population sits around 3,200,000 people. Population growth has been rapid in the state's most urbanized counties (Figure 1). While 85% of the state's residents are white, Hispanic/Latino populations have been one of the fastest growing populations in the state, accounting for 5-7% growth within the past decade.[1] Approximately 11% of Iowans live under the poverty level, and the median household income is about $75,500.[2]

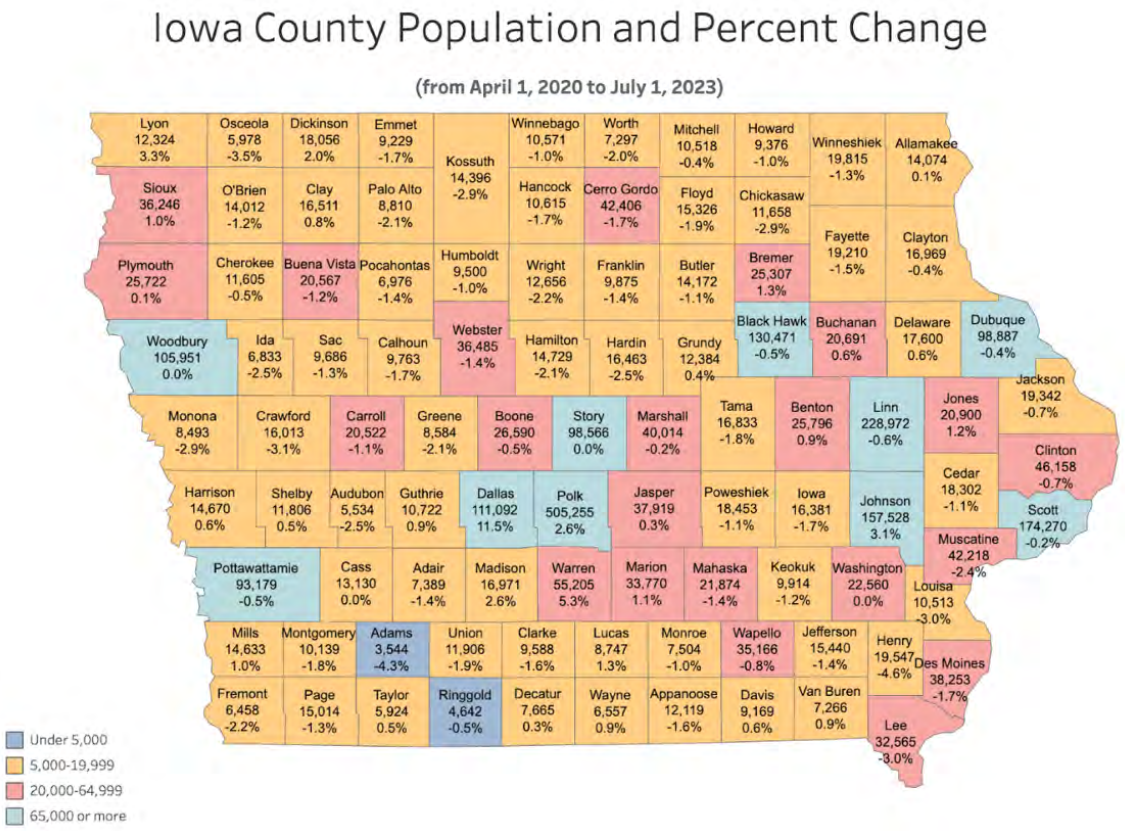

Figure 1. Iowa population density across counties. Light blue and red counties indicate urban communities, while dark blue and orange counties indicate rural communities.[3]

The State of Iowa owns 398,202 acres of land, accounting for 1% of the 36 million acres in Iowa.[4] Most of the land in Iowa is privately owned and protected for farmland use. The Department of Natural Resources is limited in the land it can purchase and is restricted from exercising eminent domains over regions marked for farmland use.[5] Protected land is dispersed across the state, and over 40,000 of these acres are natural lakes.[6] The federal government owns 97,509 acres, representing 0.3% of the land in Iowa[7] and today, most of this public land is used for hunting and outdoor recreation.

Important Sectors in Iowa's Economy

Iowa is a flat state, with its highest elevation point sitting at 1,670 feet.[8] This flat terrain makes Iowa an ideal location for agriculture, and in turn, agriculture is a vital part of Iowa's economy. Overall, Iowa has 86,911 farms, most of which are family owned. Corn and soybeans dominate crops, accounting for 98% of all crop sales, while hogs and cattle are common herd sales, at 50% and 25% respectively. The ratio of crops to animal sales is relatively stable throughout Iowa's history.[9] Since most of the state is farmland, Iowa is a great state to develop wind power, and many farmers benefit from dual land-use agreements.[10] In Iowa, agriculture is responsible for one out of every five jobs[11] and nine counties derive more than 50% of their total jobs from agriculture (Figure 2). Farmers currently face an agriculture downturn and job cuts and hope for a new state-level farm bill as they balance economic uncertainty.[12]

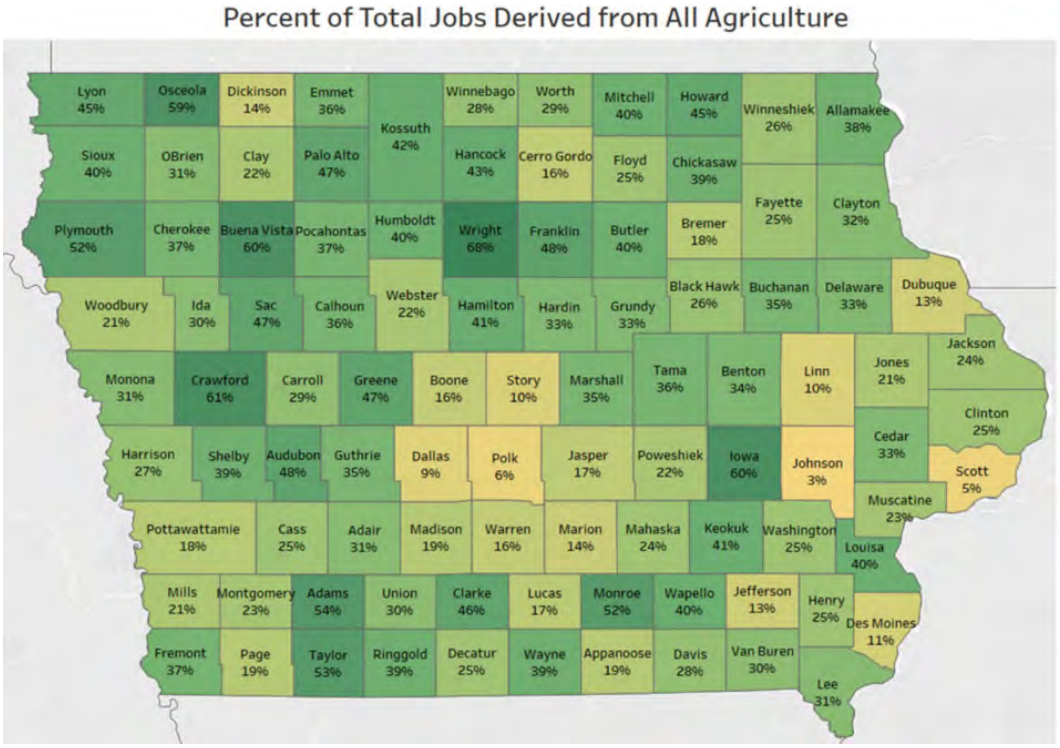

Figure 2. Agricultural share of the labor market by county. Dark green represents a higher share of agriculture jobs and yellow represents a lower share.[13]

Manufacturing is the second largest economic driver in Iowa with a 17.2% share of the total labor market in the state.[14] Iowa specializes in food manufacturing across the state, complementing the state's agricultural industry.[15] Manufacturing hotspots occur in densely populated areas within the state, which are growing with increasing urbanized populations, and is well supported by several of the state's universities and training programs.[16]

Political Climate

Historically, Iowa has been one of the most important swing states in national elections and in recent years, has been trending more red. Although Barack Obama won Iowa's electoral votes in the presidential elections in 2008 and 2012,[17] Donald Trump won Iowa's electoral votes in 2024. Figure 3 demonstrates the Iowa's shift from a purple state to a red state between the years 2012

and 2024. As the figure shows, urbanized counties account for more liberal votes while rural counties account for more conservative votes.[18] As the population increases in larger cities, the number of liberal voters may also increase within the state.

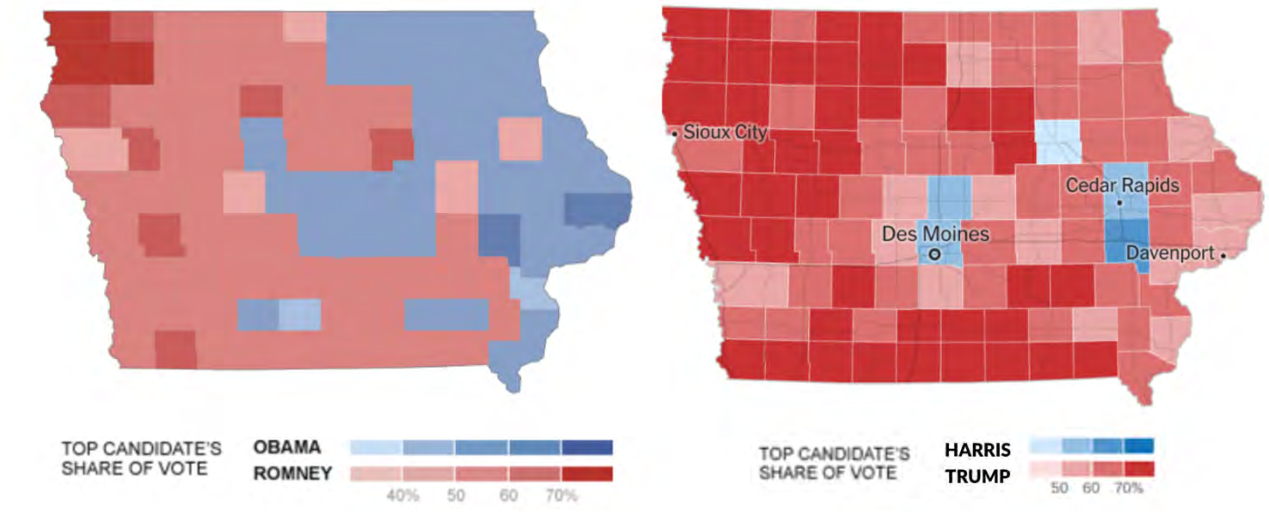

Figure 3. Electoral votes in the 2012 (left)[19] vs. 2024 (right)[20] presidential elections.

Renewable Energy in Recent Elections

Wind and solar energy have not played a major role in recent state elections or politics. Kim Reynolds, the current Republican governor of Iowa, does not have any energy priorities listed on her campaign website[21] but has historically been opposed to renewable energy expansion and promoted nuclear power to meet rising energy needs within the state. This year, Reynolds introduced a bill to increase support for nuclear power within the state, leveraging Iowa's low utility rates and strong transmission grid.[22] This plan proposes a nuclear power task force, anaerobic digestors, and modernizing energy infrastructure, but does not explicitly mention renewables. Peter Thorne, a professor of environmental health at the University of Iowa, believes most Iowans view wind energy positively, but politicians do not discuss wind power due to its relation to climate change.[23]

Renewable energy is not a strict bipartisan issue in Iowa, however. Republican representative Mariannette Miller-Meeks, chair of the U.S. House Conservative Climate Caucus, supports renewable energy and permitting reform to reduce barriers for Iowans to adopt renewables. She believes Iowa should be able to use the natural resources available to develop energy[24] but has not clarified which natural resources. Recently, Miller-Meeks defended The Big Beautiful Bill, passed in July, which has had severe consequences on economic incentives for wind and solar within the state.[25]

Electricity Mix

Iowa's electricity sector is anchored by two large investor-owned utilities (IOUs): MidAmerican and Alliant Energy. Together they account for most of the state's generation and dominate retail loads. In 2024, MidAmerican generated about 41.4 million MWh of energy, with wind making up nearly two-thirds of its mix, while Alliant produced 11.9 million MWh, with natural gas contributing about half and wind more than a third.[26] Alongside these IOUs, municipal utilities

serve smaller cities with locally controlled generation.[27] Equally important are Iowa's electric cooperatives, which together cover the largest share of Iowa's geographic service area, primarily rural regions, even though their total generation is smaller than that of IOUs.[28] In terms of customers, as of 2023 Iowa had 1.7 million electricity customers, of which about 72.5% (1,229,805) were served by IOUs, 13.2% (223,225) by municipals, and 14.3% (243,209) by cooperatives.[29] The geographic distribution of service territories is illustrated in Figure 4, which shows the State of Iowa's electric service boundary map.[30]

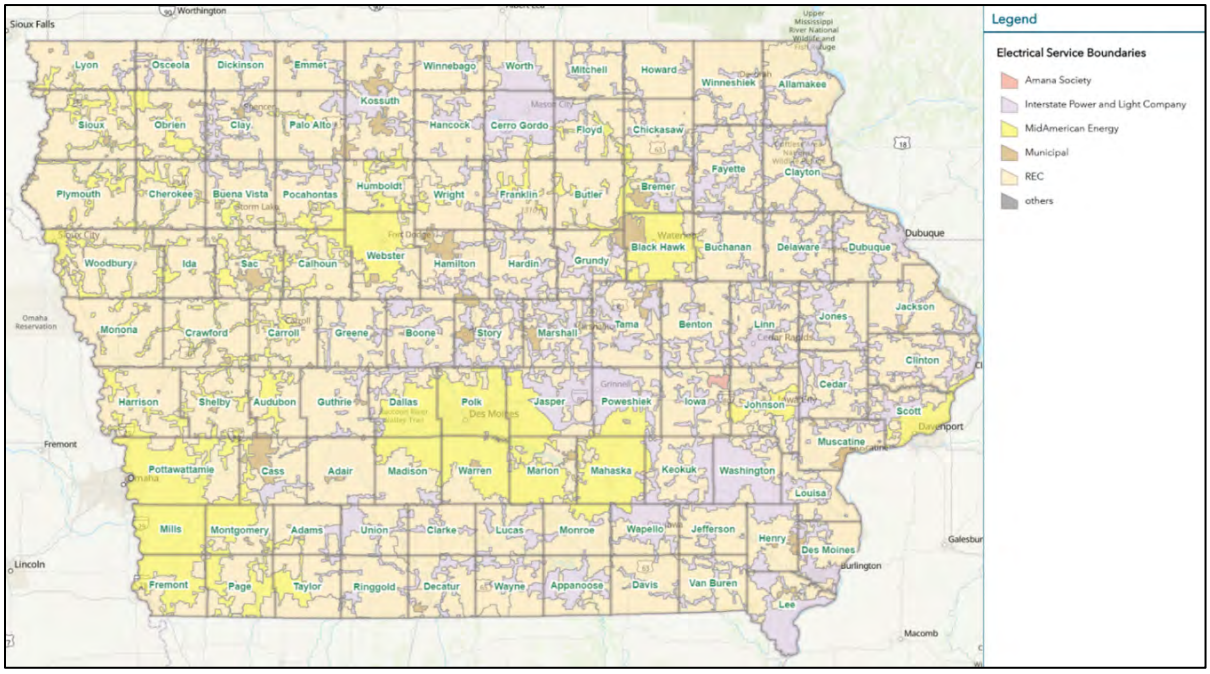

Figure 4. State of Iowa's electric service boundary map.[31]

Since 2008, Iowa has consistently produced more electricity than it consumes, making the state a net exporter across regional boundaries. In 2023, Iowa's total net generation was 69.8 TWh, while retail sales accounted for 54.4 TWh and direct use for 2.2 TWh. This left a net interstate export of about 10.5 TWh, equivalent to roughly 15% of total generation, flowing to other states.[32]

Between 2005 and 2024, Iowa's electricity generation shifted dramatically from coal to wind. In 2005, coal supplied nearly 78% of the state's electricity which fell to 21% in 2024, a decline of almost 58% in total output (Figure 5). In contrast, wind power grew more than 25-fold during the same period, expanding from about 4% of the generation mix in 2005 to nearly 60% in 2024, with a compound annual growth rate close to 19%. Natural gas played a stabilizing role, averaging around 10–15%, while nuclear power declined after the closure of the Duane Arnold plant in 2020. Iowa's status is nationally significant, generating the highest proportion of its electricity from wind of any state, and in absolute output it ranks second only to Texas.[33]

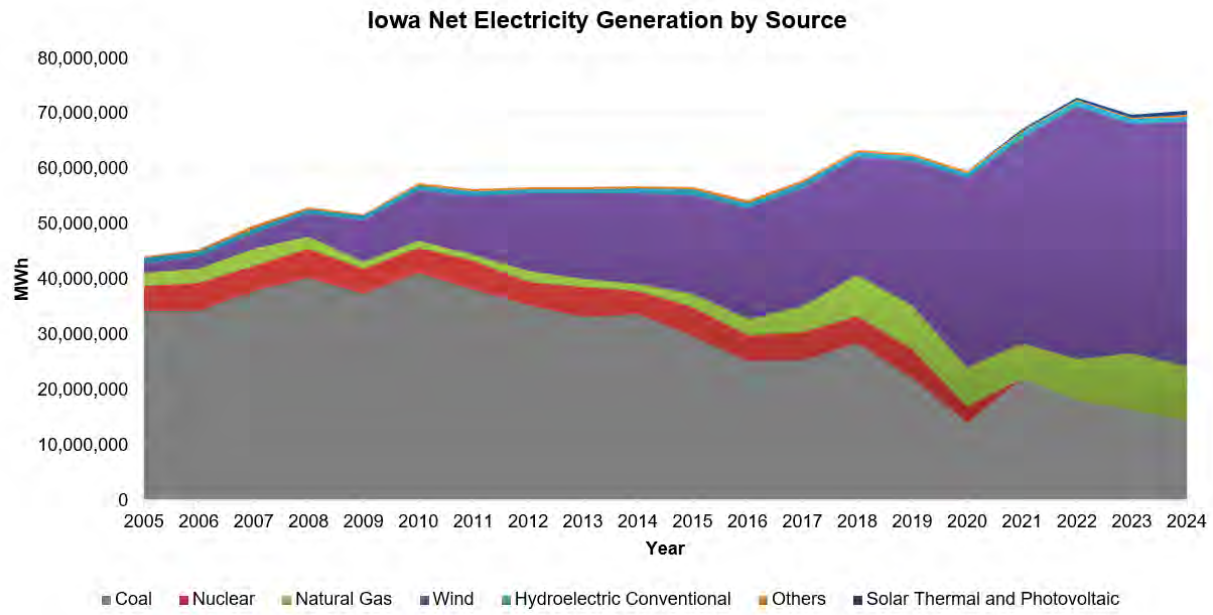

Figure 5. Net Electricity Generation by Source in Iowa, 2005–2024. Calculated based on data from the U.S. Energy Information Administration.[34]

Iowa's electricity sector is set for further transformation through confirmed projects and regulatory actions already underway. On the renewable side, MidAmerican and Alliant are developing over 400 MW of wind projects, expected to go online in 2026,[35, 36] while an additional 1,000 MW of wind is slated for development 2028-2030.[37] Solar is also scaling within the state: MidAmerican's 800 MW multi-site package was approved by the Iowa Utilities Board in 2025 and is scheduled to be online by 2027. To ensure reliability during this transition, MidAmerican has proposed 465 MW of natural gas combustion turbines in Adair County,[38] alongside Alliant's planned gas facility near Cedar Rapids currently under regulatory review.[39] In parallel, NextEra Energy is pursuing the restart of the Duane Arnold nuclear plant, closed in 2020, after securing a 2025 FERC waiver to restore interconnection rights; if licensed by the NRC and refurbished as planned, the facility could return to service by around 2028–2029.[40]

Renewable Potential

Iowa's installed wind capacity reached approximately 13 GW by 2024, concentrated primarily in the Northwestern and Central regions.[41] This fleet contributes to most in-state renewable generation but remains small relative to the state's technical resource base. Estimates from the National Renewable Energy Laboratory (NREL) and Department of Energy (DOE) place Iowa's theoretical wind potential between 280 GW and 550 GW, which would translate into several hundred terawatt-hours annually, far exceeding current electricity demand.[42] Current deployment represents only about 2–5% of the state's total wind potential. Existing utility-scale projects are clustered in areas of highest wind quality, particularly in the northwest, while many counties in the south and east still host little or no development (Figure 6).

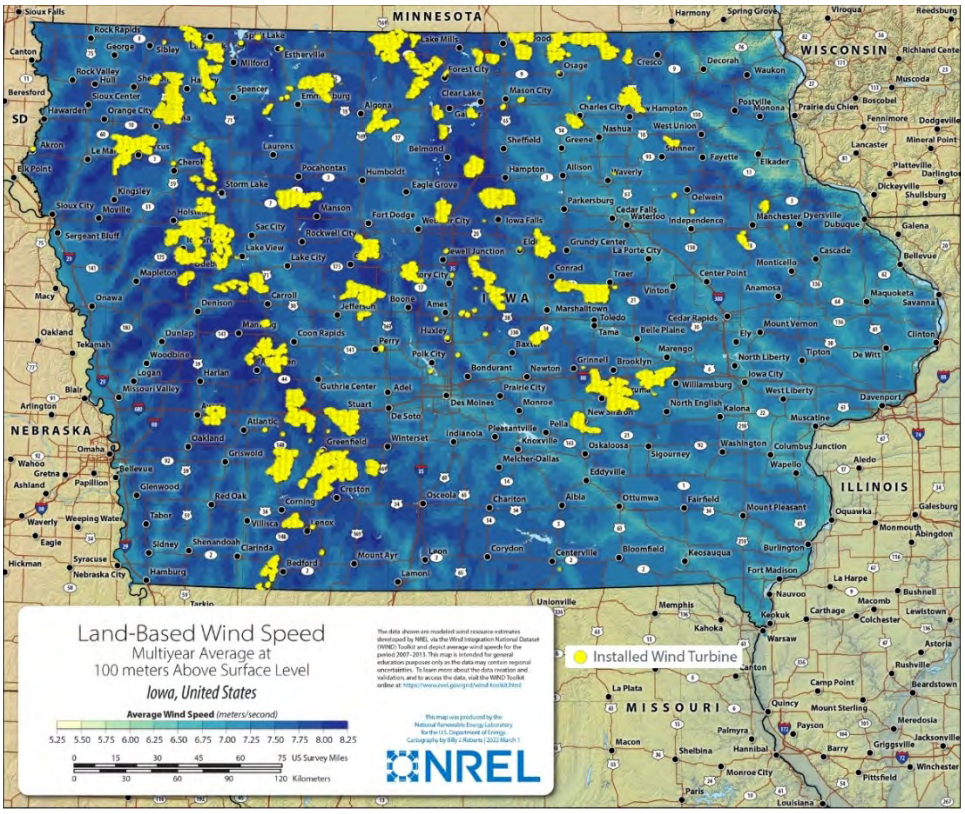

Figure 6. Wind resource potential at 100 meters above surface level and wind turbines in Iowa. Figured created based on data from the National Renewable Energy Laboratory.[43]

Iowa's current solar capacity reached 1,030 MW in mid-2025, a sharp increase from only 2 MW in 2012, yet still a minor contributor at roughly 1% of the state's electricity generation in 2024.[44] Technical assessments place Iowa's potential in the range of several thousand gigawatts, suggesting that current deployment represents well under 1% of the total technical potential. Utility-scale projects have emerged in some counties, but the geographic footprint remains limited, with many parts of the state still lacking solar development. This uneven distribution underscores the vast untapped solar potential available for future expansion (Figure 7).

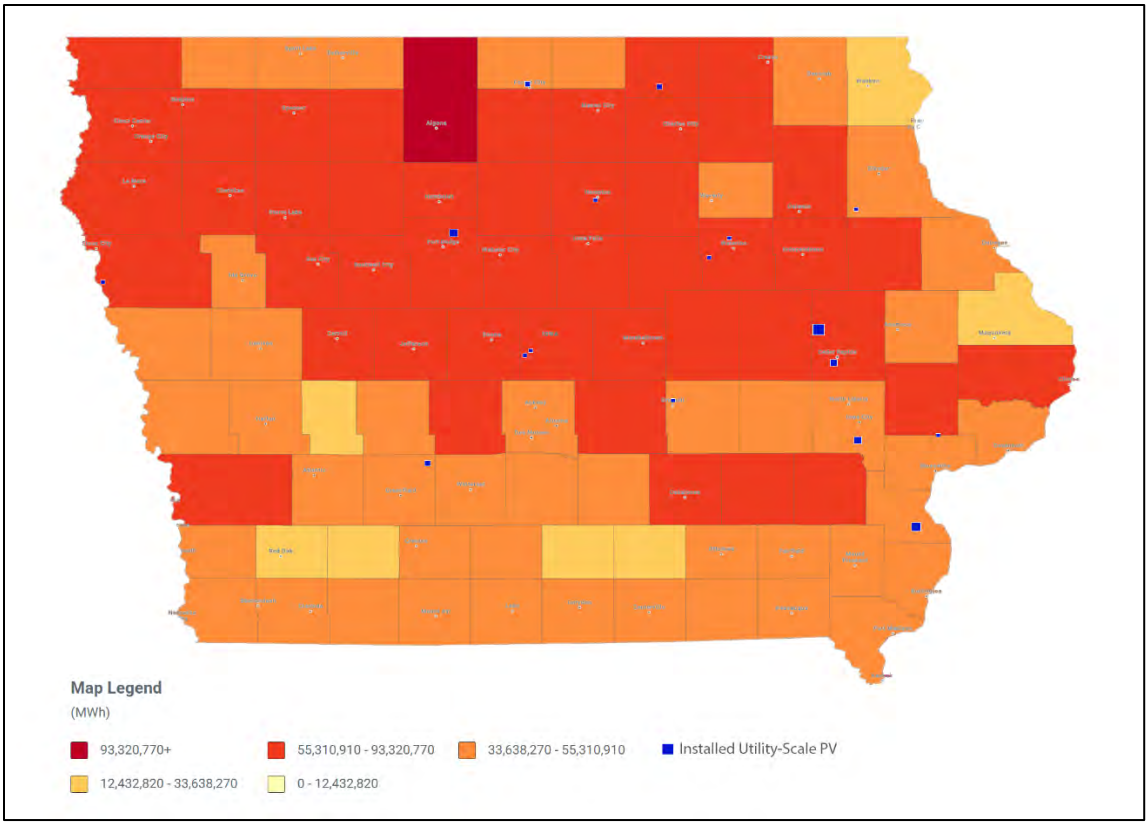

Figure 7. Solar resource potential and existing utility-scale PV in Iowa. Figure created based on data from National Renewable Energy Laboratory.[45]

Beyond wind and solar, Iowa's remaining renewable resources are limited in their viability for electricity generation. Biomass is abundant from agriculture and livestock, but higher economic value in biofuels and high collection costs keep its contribution to the grid below 1%. Hydropower potential is negligible due to the state's flat topography, with only a few small river facilities in operation.[46] Geothermal resources are unsuitable for utility-scale power, although ground-source heat pumps are used for heating and cooling.[47]

Spatial analyses indicate that Iowa's strongest wind and solar resources overlap extensively with agricultural land, particularly cultivated cropland and open pasture. The highest wind speeds are concentrated in northwestern counties, where utility-scale wind projects are already sited within active row-crop farmland (Figure 7). Similarly, solar insolation levels are highest on broad cropland areas across the central and northern regions, especially on flat, open fields with minimal tree cover. More than three-quarters of Iowa's prime solar and wind potential coincides with cultivated crops land (Figure 8).

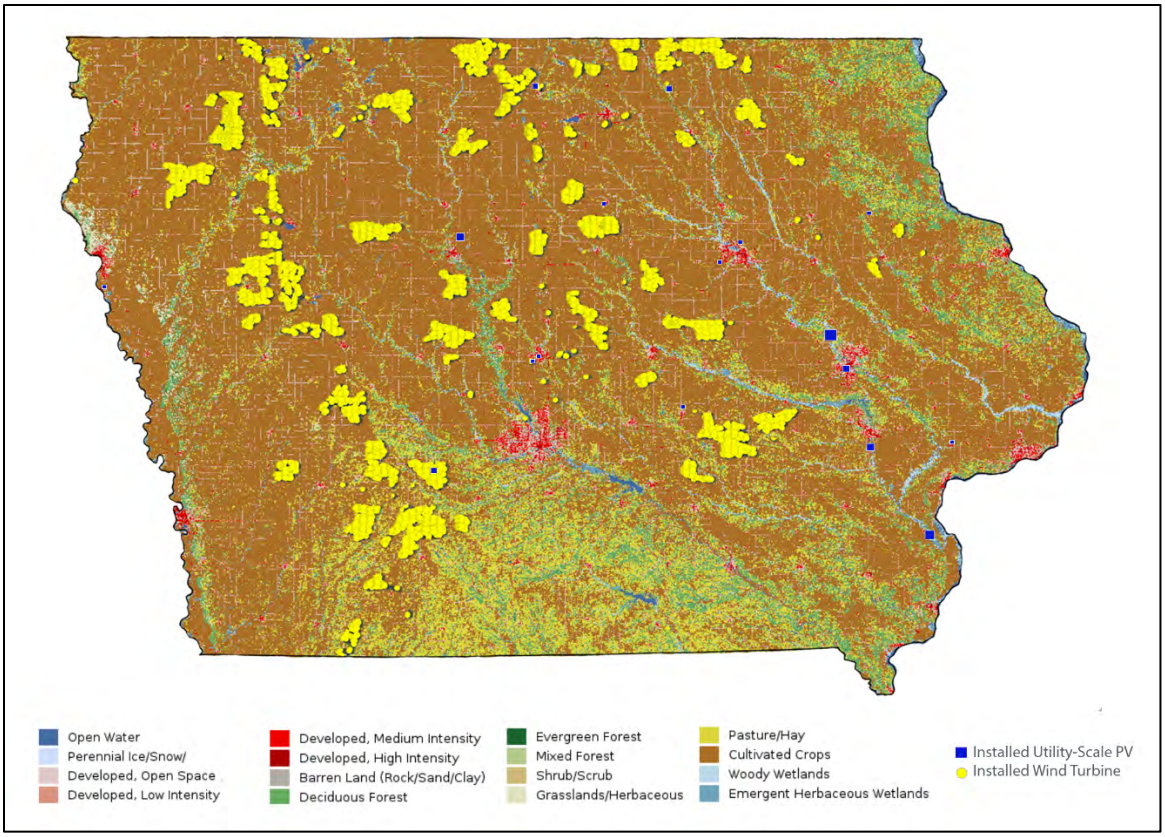

Figure 8. Land use with existing wind turbines and utility-scale PV in Iowa. Figure created based on data from Multi-Resolution Land Characteristics Consortium.[48]

Meeting Iowa's electricity demand with renewable technology is technically feasible, given the state's combined wind and solar potential. Both resources are intermittent, with wind output varying seasonally and daily, and solar constrained by diurnal cycles and weather, which makes storage, enhanced transmission, and demand flexibility essential for balancing the grid. Most of Iowa's highest-quality wind resource coincides with cropland, where turbines can be sited without displacing agricultural production, enabling dual land use that supports both farming and energy generation. Solar development is less land-efficient but can be located on open fields with high insolation, particularly in central and northern Iowa, complementing the wind resource and expanding the overall renewable potential of the state.

Public Perception

Although wind has been a long-time renewable energy source in Iowa, solar has remained a polarizing topic across the state. Recent polling suggests that adoption of attitudes is split between urban and rural regions (Figure 9).

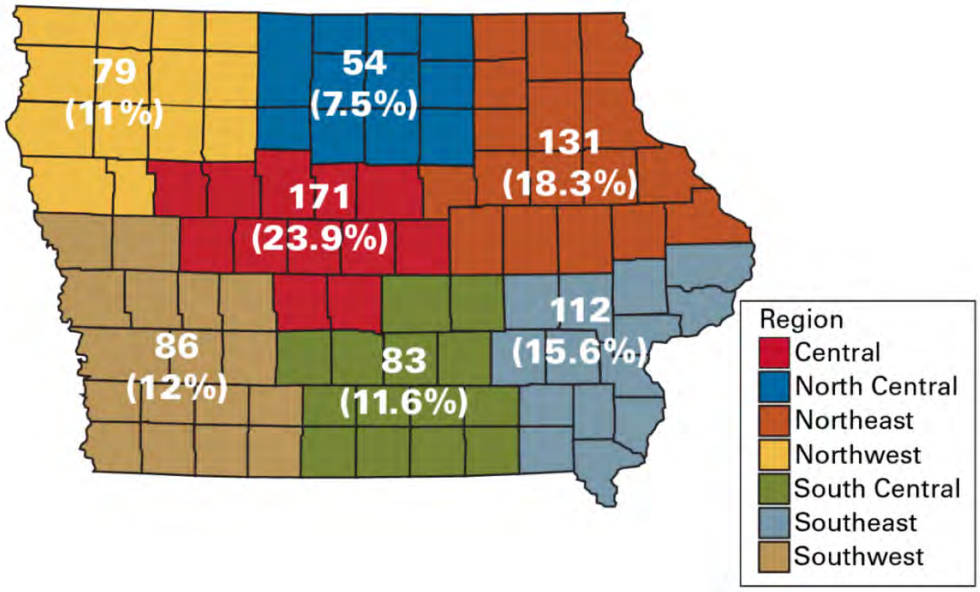

Figure 9. Regional acceptance of solar energy in Iowa.[49]

Urbanized regions (Central, Northeast, and Southeast) tend to favor solar projects more than rural counties, and studies indicate that these polarizing perspectives are an early indicator as to whether a community will host a solar project.[50] When asked how strongly they support local utility-scale solar projects, 68% of respondents indicated moderate support in new solar projects[51] (Figure 10). The survey results indicate that the largest drivers for utility-grade solar acceptance are 1) reduced utility bills and 2) reduced GHG emissions, while the largest concerns were tied to 1) land-use loss and 2) high investment costs.

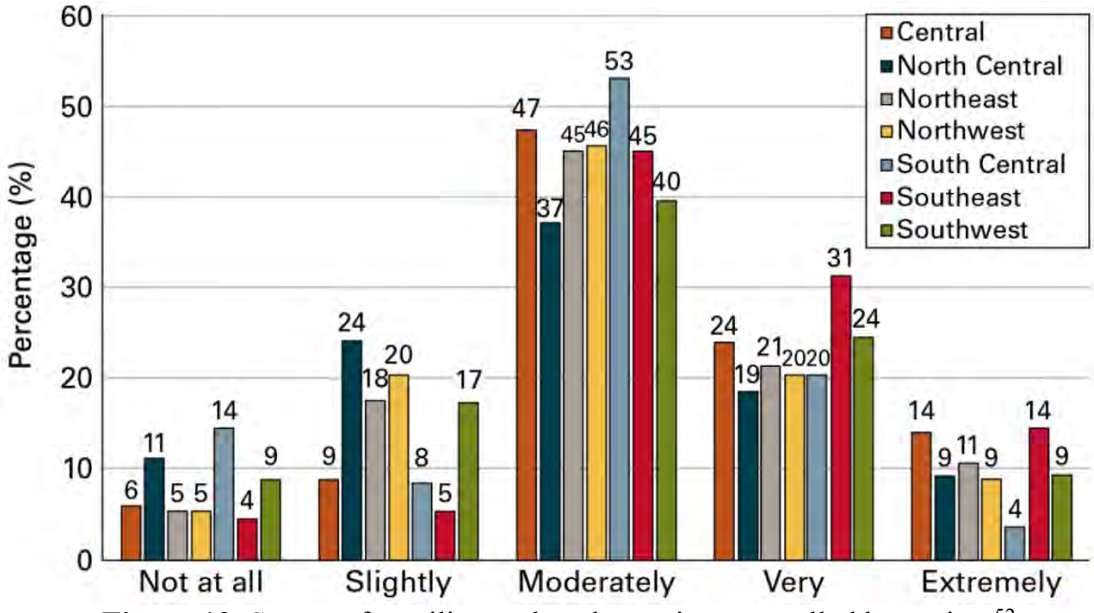

Figure 10. Support for utility-scale solar projects as polled by region.[52]

Policy Landscape

Iowa's Explicit Climate Policy

Following the 1970s energy crisis, Iowa was the first state to adopt a Renewable Portfolio Standard (RPS) as a part of the Alternative Energy Production Law.[53] The statute, signed into law in 1983 by Governor Terry Branstad, was adopted as a capacity-based requirement, requiring the state's two largest investor-owned utilities (IOUs) to own or contract a combined 105 MW of renewable or alternative energy generation by 1999. This was split between MidAmerican Energy (55.2 MW, or 52.57% of demand) and Alliant Energy Interstate Power and Light (49.8 MW, or 47.43% of demand).[54] During this time, policymakers were seeking to stimulate in-state alternative energy generation in addition to reducing grid vulnerability to the volatility of fuel price fluctuations.[55] Thus, the state adopted an RPS as an attempt to diversify their energy supply and move away from petroleum-based generation. While the adoption of the state's RPS was driven by bipartisan support to diversify Iowa's energy grid, legislators saw this as an opportunity to create more economic reliability in Iowa and engage utilities in new policies.[56] Although the RPS implicated IOUs first and foremost, federal tax incentives later scaled investment opportunities in renewable and alternative energy sources,[57] which accelerated the development of renewables within the state.

After the RPS was passed in 1983, renewable energy adoption grew slowly throughout the 1990s and early 2000s. Utilities mostly ignored the law until 1996 when the Iowa Utilities Board (IUB) began to enforce trading rules.[58] The IUB interpreted the statute's 105 MW figure to mean "average capacity" based on kilowatt-hour output, thus mandating the payment of incentive rates for 260 MW. In addition to implementing the RPS, the IUB helped form regulatory choices to shape how renewables were developed within the state. These regulatory choices included decisions on how to quantify energy capacity and how incentive payment programs worked.[59] Truly, the IUB's role in navigating the RPS not only paved the way for renewable energy to be developed by IOUs, but it clarified energy capacity in renewables development and incentivized the development of payment programs to help customers burden the cost of a transitioning grid. After the IUB became more involved, utilities and regulators began to encourage more renewable energy development within the state. However, Iowa's RPS was just the beginning of the state's transition towards renewable and alternative energy generation sources.

In the 1990s, new policy levers such as net-metering, REC trading options, and federal tax incentives, drove larger renewable and alternative generation development[60] within the state. In 2001, the governor of Iowa set a voluntary 1000 MW wind goal, which was a turning point in expanding the state's reliance on renewables. Since its insemination, Iowa's RPS has been amended several times. In 1991, the RPS was amended to expand the definition of renewable energy sources to include solar, wind, and biomass. Before this amendment, the RPS did not specify where renewable energy had to come from, thus this amendment clarified the landscape of renewable energy development within the state. In 2003, the RPS was amended further to provide regulatory certainty regarding baseload generation buildout. This encouraged the development of transmission resources to encourage economic development and eliminated the prohibition of IOUs from owning renewable energy facilities.[61] Other state statutes passed in the 2010s and 2020s addressed distributed generation and net metering.

The original 105 MW target was not the driving force for Iowa's large renewable fleet that we see today. Rather, market forces and tax incentives were responsible for advancing Iowa's renewable

generation capacity. Thus, although Iowa's RPS was a landmark piece of legislature in state-based renewable standards, most of Iowa's growing renewables transpired because of utility planning, voluntary goods, and regulatory action such as IUB interpretations, utilities' net-zero pledges, and REC markets. Surprisingly enough, even with this historical groundwork, there are no state-level policies incentivizing utilities to pursue or commit to a fully 100% renewable generation goal.

Iowa's Local Government Leads the Way in Climate Policy

At the state level, Iowa does not currently have an explicit climate policy. Climate action is more prominent at the local level, where municipalities are responsible for setting clean energy and emissions goals. Cities like Des Moines and Iowa City have net-zero emissions targets and carbon-free electricity goals. Des Moines has a Climate Action & Adaptation Plan with goals to achieve 100% carbon-free electricity by 2035, and net-zero emissions by 2050,[62] while Iowa City adopted a Climate Action and Adaptation Plan in 2018, with a goal of an 80% reduction in GHG by 2050.[63] These local plans illustrate how Iowa's climate ambition is being addressed at the municipal level rather than statewide policy.

Local counties are also taking the lead on renewable energy development within the state through programs such as the Climate Pollution Reduction Grants (CPRG) program. The CPRG provides nearly $5 billion in grants to states, local governments, tribes, and territories to develop and implement plans for reducing greenhouse gas emissions and expanding renewable energy generation.[64] Although Iowa was not awarded a CPRG on the state-level, several local municipalities within the state were awarded grants including Polk County and Des Moines. These local communities produced Priority Climate Action Plans (PCAPs), outlining clear measures for reducing emissions and adopting more renewable energy in low-income communities. For example, the Polk County PCAP includes measures for reducing emissions, investing in sustainable infrastructure, improving energy efficiency, developing training for solar installation programs, and expanding renewable energy in low-income communities.[65] Polk County's PCAP is primarily focused on expanding distributed generation and hybrid solar/storage systems, positioning the region to apply for larger implementation grants to expand renewables within their communities.

Tax Policy

Local Taxes for Wind Energy

Iowa imposes an Energy Replacement Generation Tax Exemption of $0.0006/kWh on all electricity generators. except low capacity factor generation plants, facilities owned by or leased to a municipal utility or state university, methane gas conversion, and wind every conversion property subject to special valuation or eligible for a tax credit.[66] This legislation replaces property taxes on energy generation facilities with an excise tax on electricity generation collected by the state government that gets distributed to local governments. The excise tax is based on the value of utility property for each taxing district.[67]

Local county governments can voluntarily implement a Special Assessment of Wind Energy Devices and tax utility-scale wind projects according to a special valuation system. To do this, the local government passes an ordinance assessing wind projects based on a percentage of the net acquisition cost, or total cost to acquire property and install wind turbines. The assessment begins at 0% in the first year and increases 5% every year, up to a maximum of 30% in the seventh and

following years. Wind plants must be completed before assessment, as this ordinance does not apply to partial assessments.[68]

To date, every county with a wind project has chosen to assess utility-scale wind farms under the special valuation. This system likely appeals to county officials due to an increased local tax base, a decreased property tax burden on residents, and the stable revenue structure.[69] Compared to the replacement tax that is dependent upon energy generated, the special valuation system accumulates revenue based on the net acquisition cost, which ensures a steady and consistent source of tax revenue in these counties every year. While special valuation does not ensure higher tax revenue, counties can build stability into their revenue sources and keep control over local finances with this system.

If a county hypothetically does not pass a special valuation ordinance, wind energy systems pay the utility replacement tax of $0.06/kWh produced and assessed at market value. This change does not impact the tax dollars developers pay but does alter how the taxes are dispersed and used at the local level.[70] If the local government repeals the special valuation ordinance, the property will continue to be valued based on the special valuation until the end of the 19th assessment year, when the property will then be subject to assessment and taxation under the replacement tax.[71]

Local Taxes for Solar Energy

Although not explicitly stated in the Energy Replacement Generation Tax Exemption, solar systems are taxed at $0.0006/kWh. Solar projects continue to pay taxes to the local government based on the project's electricity generation, transmission assets, and electricity delivered that year.[72] Counties are not authorized to use the special valuation system for solar energy systems. Solar property could also be subject to local assessment if the land underneath solar panels are used for another purpose, like agrivoltaics.[73] Overall, utility-scale solar has not received the same attention in taxation policy as wind, likely due to it being a newer technology and contrasting land usage when compared to farmland.[74] For Iowa's farmers and counties that do choose to pursue solar projects, the lack of clarity and support in the legislation hinders their ability to build solar.

State Level Taxes

In 2005, Iowa enacted the Renewable Energy Production Tax Credits policy for wind energy (476B) and renewable energy generated, sold, or consumed on-site (476C) (see Appendix 1). This was the highest and only transferable tax credit rate for renewable energy in the U.S.[75] Although lucrative and successful, this tax credit primarily focused on medium scale projects, only applied to projects added in 2005-2017, and reached capacity quickly. As wind and solar generation projects become larger and developers pay less attention to medium-scale potential projects, these tax credits become less applicable. Although they had the intended effect initially, their effectiveness has decreased over time.

Iowa implemented a Solar Energy Systems Tax Credit that expired at the end of 2021. This corporate tax credit allowed individuals and corporations to claim a state tax credit worth 50% of the Federal Investment Tax Credit.[76] Taxpayers who apply for the Iowa tax credit must also claim the corresponding federal credit.[77] Qualifying solar residential installations must meet the criteria for the federal residential energy efficient property credit and be complete upon application. Qualifying solar business installations must meet the criteria for the federal residential energy efficient property credit and be complete and placed in service upon application.[78] The cumulative value is limited to $5,000,000/year, with a minimum of $1,000,000/year reserved for residential solar installations. Residential systems may claim $5,000 and commercial systems may claim

$20,000. This policy incentivized smaller solar projects, as residential system owners can capitalize on this tax credit. As credits are reserved on a first-come, first-serve basis, taxpayers must complete an application to reserve their tax credit.[79]

Iowa allows for a Renewable Energy Equipment Sales Tax Exemption from the 6% state sales tax for solar, wind, and hydroelectric equipment. This includes equipment used to manufacture, install, or construct wind farms of all sizes, and equipment used to convert solar radiation, waterpower, or wind power to energy.[80]Equipment can include solar panels, inverters, and energy transmission devices. This tax exemption applies to renewable energy equipment for small-scale and utility-scale projects, and both developers and individuals can capitalize on this exemption. Iowans installing rooftop solar can save $1,320 with the sales tax exemption, incentivizing undecided homeowners to install their own rooftop solar panels[8182]

Iowa's aggressive renewable energy taxation policy has directly encouraged the development of their renewable energy systems, especially wind energy, in the state. While some legislation has expired or become irrelevant, the policy still in place encourages local governments and residents to welcome renewable energy into their counties and properties. When analyzing Iowa's tax policy, the special valuation system may have the most influence on whether a wind farm will be constructed. Local community leaders understand the potential economic gains from welcoming utility-scale wind energy systems into their communities, as it can increase a relatively stagnant tax base and decrease property tax burden. If Iowa leaders plan to diversify their renewable energy portfolio, state legislators must consider implementing specific and clear tax policy on other renewable energy technologies.

Siting Authority

Iowa's renewable energy siting framework is rooted in county-level land use authority established under state-enabling legislation. County ordinances govern unincorporated areas outside city boundaries, while incorporated municipalities hold independent zoning authority within their limits. Cities may adopt ordinances for wind, solar, or storage systems, but most regulations in practice apply to unincorporated areas under county boards of supervisors. At the state level, only projects with a nameplate capacity of 25 megawatts or more require certification under Iowa Code §476A. The Iowa Utilities Commission reviews such projects for energy related factors like public convenience, reliability, and interconnection, but zoning and -related factors like public convenience, reliability, and interconnection, but zoning and land decisions remain strictly under county jurisdiction. County approval is a prerequisite for state certification, and public hearings are held locally with county officials participating-use decisions remain strictly under county jurisdiction. County approval is a prerequisite for state certification, and public hearings are held locally with county officials participating as formal parties. The Board cannot override county permitting authority.[83]

Although county governments retain full control over zoning approvals for renewable energy projects, uncertainty persists regarding the boundary between local and state authority under Iowa Code §476A. The most consequential ambiguity lies in §476A.1(5), which defines a "facility" as an installation of 25 MW or more without clarifying whether a wind farm must be treated as a single facility or as multiple smaller facilities based on the configuration of collection lines. This gap has enabled developers to segment large wind projects into sub facilities below the 25 MW threshold, thereby avoiding state certification and leaving review entirely to counties. The Iowa Supreme Court upheld this interpretation in *Mathis v. Iowa Utilities Board*, allowing a 170-turbine

project to proceed without a state certificate despite landowner objections.[84] Beyond this tested ambiguity, two provisions of the statute create latent uncertainties. Section §476A.8 provides that once a state certificate is issued "no other person or agency" may require additional approvals, a clause whose broad wording could be read to preempt county zoning even though the Board has never invoked it for that purpose.[85] Likewise, §476A.15 grants the Board authority to waive any requirement of the chapter, a discretionary power that theoretically could narrow or expand the role of local permitting, though no precedent demonstrates such use.[86]

These statutory ambiguities have also prompted a series of legislative and regulatory efforts to revise Iowa's siting framework, although none have yet produced changes to section §476A.[87] The first major attempt came from the Iowa Utilities Board in 2020 through the RMU 2020 0028 rulemaking, which sought to redefine the meaning of "facility" under chapter §476A and expand state level review, but the proceeding did not advance to adoption.[88] Legislative efforts followed in subsequent sessions. In 2022, rural Republican legislators representing counties where wind and solar development had generated local conflict introduced Senate File 2321, a proposal to restrict utility scale solar facilities on high quality agricultural land through limits on corn suitability ratings, minimum spacing requirements, and residential setbacks.[89] In 2023, similar concerns led to proposals such as Senate File 2 and SSB 1077, which aimed to establish broad statewide setbacks for wind turbines and commercial solar installations in response to pressure from anti wind and anti-solar groups and from agricultural constituencies worried about farmland preservation.[90] These bills did not move out of the committee.

More recent activity includes Senate File 376 from 2025, which would require county approvals for wind, solar, and battery energy storage projects to align with new statewide standards and remains active after receiving a subcommittee recommendation, although it has not progressed to full floor consideration.[91] These initiatives have attracted support from organizations such as the Iowa Farm Bureau Federation, which has advocated statewide consistency and the protection of agricultural land. They have also faced opposition from renewable energy developers and many county governments who argue that such measures could weaken local control, increase permitting uncertainty, and slow project timelines.[92] The combination of industry resistance, divided county level interests, and limited bipartisan support has so far prevented these proposals from being enacted, even as debates about the appropriate balance between state and local siting authority continue.

In the absence of state-level revisions to section §476A, counties remain responsible for the practical implementation of siting decisions for wind, solar, and battery energy storage systems.[93] By 2025, counties differ substantially in how comprehensively they regulate these technologies. Some have adopted ordinances that address all three, while others regulate only one technology or have not enacted any siting provisions at all. A full summary of ordinance adoption, including a statewide map and detailed table of county coverage for each technology, is presented in Table 1 and Figure 11. Statewide organizations such as the Iowa Environmental Council, the Iowa Utilities Commission, and the Center for Rural Affairs support county-level ordinance development by providing model language, siting guidance, and procedural recommendations. Drafting and revision processes are usually carried out by county planning and zoning commissions with input from legal counsel, opportunities for public participation, and collaboration with regional planning affiliations.[94]

Table 1. Distribution of Renewable Energy Ordinance Coverage by County (2025).[95]

Ordinance Type Adopted	Number of Counties
Wind, Solar, and BESS	5
Wind and Solar	28
Wind and BESS	1
Solar and BESS	1
Wind only	34
Solar only	1
No ordinance	29
Total	**99**

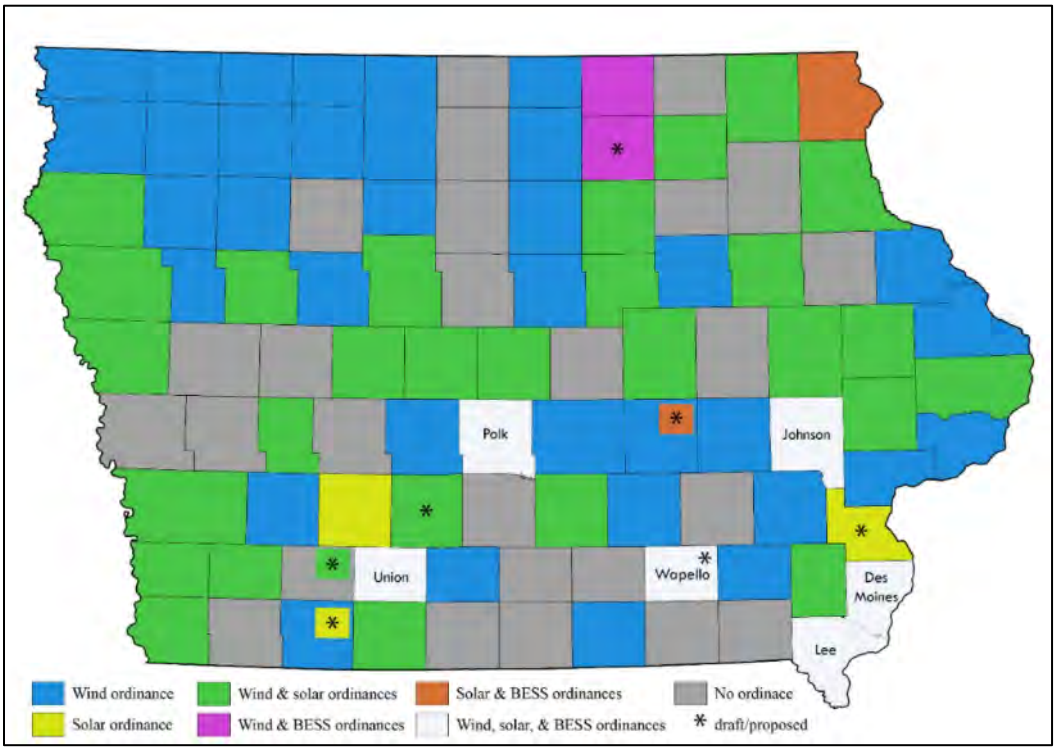

Figure 11. County-Level Ordinance Coverage for Renewable Energy in Iowa (2025).[96]

Wind Energy Ordinances and Siting Standards

County governments in Iowa regulate wind development through locally adopted ordinances, and 68 of the state's 99 counties have established siting standards.[97] These ordinances vary in their technical requirements, with common setback distances ranging from 1,000 to 1,600 feet and some counties using proportional formulas based on turbine height; noise limits are typically set between 45-60 dB, and several ordinances include turbine height caps between 500 and 600 feet or rely on case-by-case review.[98] Patterns of development also reflect differences in how early counties adopted such regulations. Adair County, for example, hosts more than 500 turbines, the highest of any county in Iowa, despite not having a dedicated wind-siting ordinance in place.[99] Some counties that previously lacked stand-alone wind provisions are now drafting new regulations, such as Floyd County, which is actively revising its zoning ordinance for utility-scale wind systems.[100] Other counties, such as Clinton County, have enacted temporary moratoriums while evaluating

potential changes to their rules, resulting in wind development proposals being placed on hold during the review period.[101]

Solar Energy Ordinances and Siting Standards

County governments in Iowa regulate utility-scale solar development through locally adopted zoning ordinances, and 35 of the state's 99 counties have established solar-specific siting standards. These ordinances commonly specify the zoning districts in which solar facilities may be permitted, set minimum setbacks from property lines or occupied residences, and require site plans addressing fencing, drainage, vegetation, and decommissioning. Typical property-line setbacks fall around 50 feet, while residence setbacks often range from 100 to 300 feet depending on zoning district classifications. Some counties also include requirements beyond basic setbacks and site plans. Winneshiek County applies a lot-coverage-style limitation by allowing setback reductions only when a portion of the project area remains as open or vegetated ground, while Montgomery County requires perennial vegetative groundcover for erosion control and long-term site stabilization.[102] Counties that previously lacked stand-alone solar ordinances are now drafting new regulations, such as Poweshiek County, which has circulated a draft ordinance governing utility-scale solar energy systems in unincorporated areas.[103]

Use of Public Lands

Iowa has one of the lowest proportions of public land in the United States, with about 1% of its total area owned by federal or state governments.[104] The state ranks 49th nationally in public land ownership.[105] Most of Iowa's land is privately owned and primarily used for agriculture. As a result, nearly all renewable energy projects, including wind and solar, are developed on private land through leasing agreements with farmers and landowners. Iowa does not have a public land leasing system for utility scale renewable energy development under the Bureau of Land Management or any equivalent state framework.[106]

Since the early 20th century, Iowa's public land policy has prioritized conservation, wildlife management, and recreation. [107] The Iowa Department of Natural Resources manages approximately 400,000 acres of state parks, forests, and wildlife areas.[108] No statutory provisions currently authorize the use of these lands for renewable energy installations. The Iowa Energy Plan, first released in 2016 and updated in 2022, outlines energy efficiency and emissions reduction goals but does not include directives to develop renewable generation facilities on public land.[109]

Several local governments and public institutions in Iowa have initiated small scale renewable projects on publicly owned property. The University of Iowa operates on-campus solar facilities as part of its institutional sustainability commitments.[110] The cities of Cedar Rapids and Des Moines have installed solar arrays on municipal sites such as wastewater treatment facilities and remediated brownfield land.[111] These installations represent localized applications of renewable energy within public assets rather than a statewide policy framework.

As of 2025, there are no active legislative proposals that expand the use of public lands for renewable energy development. Recent legislation, including Senate Study Bill 1198 (2025) and House File 2104 (2024), proposes to limit the Iowa Department of Natural Resources' authority to acquire new public lands.[112] These measures reflect a continued focus on maintaining private land ownership and restricting the expansion of state land holdings. No legislation or administrative rule currently provides a process for leasing or developing renewable energy facilities on public lands in Iowa.[113]

PUC Policies

Within the past 5 years, there have been significant changes in Iowa's climate policies. Overall, the state's climate stance has become more focused on regulation rather than expanding renewable energy, specifically in the context of carbon capture and pipeline infrastructure. The IUB regulates and permits electricity, transmission lines, natural gas, and water utilities within the state,[114] while the Iowa Utilities Commission (IUC) oversees non-electric energy infrastructure such as pipelines and petroleum projects.[115] Recent legislative actions have increasingly aimed to limit the regulatory powers of these commissions rather than expand their mandates to include renewable energy targets or emissions reduction goals.

Iowa's Public Utility Commission (PUC) policies once laid out the foundation for early wind energy growth within the state, and today, they serve as the battleground for competing visions of the state's energy future. The IUC's 2024 approval of the Summit Carbon pipeline triggered immediate legislative scrutiny, leading to reforms that strengthened requirements for transparency, land restoration, and rate-making processes.[116] These policy changes mark another transition in Iowa's energy landscape; state policy is moving away from an expansionist renewable agenda and toward a more regulated, infrastructure-focused approach. Recent legislation, such as HSB 123/HF 834, signals that future renewable deployment is likely to occur through utility-led pilot programs framed around innovation and economic development.

Specifically, HSB 123/HF 834 represents a significant development in Iowa's energy governance, modifying ratemaking for electric generation, energy storage, and transmission, and introducing the Right of First Refusal (ROFR) for transmission projects.[117] The adoption of ROFR would give incumbent utilities the first opportunity to construct or co-own new projects, impacting competition in the transmission sector, with potential cost implications for renewable developers. This bill also adds land restoration standards requiring post-construction remediation for agricultural easements and the integration of conservation investments.[118] Additionally, the legislation authorizes utilities to introduce innovation program tariffs (which customers can opt-into) which invest in more experimental energy solutions, without burdening customers with the innovation costs. It also shifts regulatory oversight of the Energy Infrastructure Revolving Loan Program to the Iowa Economic Development Authority. This has the potential to broaden program eligibility while shifting the program's focus from energy-related outcomes to economic development goals.[119]

PUCs are Leaning into Distributed Generation

Earlier this year, the IUB adopted new rules and standards for the interconnection of distributed generation facilities on the grid.[120] These interconnection rules govern how rooftop solar, community solar, wind, and other distributed renewable energy systems connect to the grid. These new regulations limit the monitoring needed for smaller distributed systems, making it more feasible for small-scale renewable developers, homeowners, and communities to build distributed energy systems.[121] Additionally, the new standards include a fee structure and preapplication option to help developers, individuals, and communities understand build-out costs and grid constraints before committing to a project,[122] increasing transparency in the process and encouraging further development of distributed generation on the grid. The IUC also seems to be preparing for a future where distributed generation is more prevalent within the state by moving away from traditional net-billing models of payment for distributed generation customers. Under

Iowa law, the two major IOUs in the state must offer inflow-output (exports credited in dollars) or net-billing (exports credited in kWh) to distributed generation customers.[123] This law also requires the IUB to develop a "value of solar" method when distributed generation rates reach 5% penetration,[124] signaling that compensation could move away from kWh credits to another form of payout that incentivizes the development of more rooftop and community solar projects. As of 2024, Iowa reached 3.3% distributed generation penetration,[125] so as the state continues to incentivize distributed systems through a more transparent process, compensation credits are reinforcing the economics of individuals and communities invested in distributed generation.

Although Iowa was the first state to formally adopt an RPS, this landmark policy was only the beginning of expanding renewable capacity within the state. Since 1983, policies within the state have engaged utilities in processes to diversify the state's grid; decreasing energy vulnerabilities, and incentivizing individuals and communities to personally invest in transforming the state's grid. While Iowa does not currently have a state-specific climate policy, local communities and counties have adopted strategies to help them transition to renewables. Finally, current PUC policy levers encourage a larger penetration of distributed generation for those who can afford it, incentivizing individuals and communities to participate in compensation programs that further diversify the state's renewable energy portfolio.

Transmission and Infrastructure Policy

Historically, Iowa has invested very little in their transmission infrastructure. Due to an aging grid and energy storage issues, Iowa exports most wind energy generation out of state. Exporting too much excess has caused the state problems in the past with long power outages resultant from intense climate change induced storms.[126] Governor Reynolds has stated one of Iowa's highest priorities is to "ensure the state has access to abundant, reliable, and affordable electricity"[127] and has expressed support for the Midcontinent Independent System Operator's (MISO) Long Range Transmission Plan,[128] highlighting how delaying transmission projects would stall more than 7 GW of proposed energy generation projects in Iowa alone.[129] Governor Reynolds proposed Senate Study Bill 1112 (renamed Senate File 585), a large utility bill summarizing different efforts over the past few years, as part of her energy improvement plan. The bill functions as a catch-all bill of past energy efforts and encourages diverse energy development, authorizes the right of first refusal to existing utilities on new transmission projects and utilities to offer tariffs to help with programs, requires land restoration requirements following construction, and more. The bill has been controversial amongst Iowan politicians due to the all-encompassing nature of the bill. While it is unlikely this bill will gain support from everyone, supporters of the bill believe energy sector innovation is essential for the state economy and sustainable energy production.[130] While Iowa has slowly increased transmission over the past decade, they need further investment to update and modernize the electricity grid and improve resilience.[131]

Additionally, Iowa established the Energy Infrastructure Revolving Loan Program in 2021 to replace the previous loan program and improve utility infrastructure in counties impacted by natural disasters.[132] The current program offers low-interest financing for energy infrastructure projects. These projects must use innovative technologies and meet one of seven purposes, including electric grid modernization and energy infrastructure development. This program is currently operational and accepts applications on a quarterly basis, with a maximum of $10 million to be distributed each quarter and a 15-year maximum loan term.[133]

Iowa established the Iowa Grid Resilience Fund in 2023 to improve the resiliency of the electrical grid and reduce the frequency and duration of outages. This program provides grants to eligible entities, like electric investor-owned utilities, municipal utilities, and transmission owners, to address resilience of the grid. The Iowa Energy Office, authorized by the Infrastructure and Investment Jobs Act, administers the program.[134] In 2023, Iowa was granted $11,816,860 by the federal government to be distributed to projects throughout the state.[135]

An important infrastructural update to increase resilience has been the implementation of Smart Meters in Iowan's homes by Alliant Energy. Smart Meters are a two-way wireless communication device that sends customer meter data, like meter number, energy usage, and diagnostic information, to Alliant Energy. These sensors quickly detect power outages, improve the integration of renewable energy sources, and reduce pollution. Furthermore, residents can improve their energy efficiency, leading to increased control over energy bills. Although some residents resisted Smart Meters early on, less than 1% have chosen to opt out.[136]

In the private sector, transmission investors, energyRe and Copenhagen Infrastructure Partners, have collaborated on the SOO Green transmission project. SOO Green would connect MISO, Iowa's transmission operator, and the PJM Interconnection and improve the connection between the Midwestern and Eastern U.S. renewable energy markets. This project includes the construction of a 350-mile underground transmission line connecting Mason City, Iowa to Yorkville, Illinois through existing railroad corridors, to avoid environmental and land use issues. Investors expect the new line to power 1.5 million homes and bring $3.2 billion to the regional economy. In Iowa, this construction project would create more than 5,000 jobs and bring an additional $1 billion to the state economy.[137]

State legislation can help incentivize transmission and grid infrastructure maintenance and updates, but private projects like SOO Green and others are essential for modernizing the electricity grid and increasing resilience. They allow for greater connection across the country and can strengthen Iowa's grid. Transmission and infrastructural upgrades face long queues for study and approval by transmission operators, which delayed SOO Green, and other regulatory hurdles that inhibit development. Iowa needs to focus on upgrading aging transmission and distribution lines and invest in smart grid technology, better data analysis, and energy storage technology to reduce outages and emissions, and create a more resilient power grid. [138]

Analysis

Iowa is frequently cited as a national leader in renewable energy deployment, particularly wind power. However, this leadership has not been driven by strong or evolving statutory climate mandates. Instead, Iowa's renewable expansion reflects a policy pathway shaped by early regulatory experimentation, utility centered investment decisions, and market driven incentives. While this framework enabled rapid wind development in the 2000s and 2010s, recent policy trends suggest a shift away from expansionary renewable policy toward regulatory control and infrastructure governance.

Iowa was the first U.S. state to adopt a Renewable Portfolio Standard under the Alternative Energy Production Law in 1983. The statute required the state's two largest investor-owned utilities to own or contract a combined 105 MW of renewable or alternative energy capacity by 1999.[139] Although pioneering, the policy was modest in scope and quickly satisfied, limiting its long-term effectiveness as a demand driver for renewable expansion. Subsequent amendments clarified

eligible technologies and ownership rules but did not introduce escalating targets or emissions reduction goals. As a result, Iowa's RPS functioned more as a foundational policy signal than as a sustained deployment mechanism.

Despite limited statutory ambition, Iowa experienced substantial renewable growth due to regulatory interpretation and utility investment practices. In the 1990s, the Iowa Utilities Board (IUB) interpreted the RPS requirement as an average energy output obligation rather than nameplate capacity. This interpretation effectively increased the amount of wind capacity utilities needed to build to comply, expanding the practical impact of the statute.[140]

More importantly, Iowa's vertically integrated utility structure allowed investor-owned utilities to own renewable generation assets and recover costs through the rate base. Once approved by the IUB, renewable investments were treated as core infrastructure, with financial risk largely borne by ratepayers rather than developers.[141] This lowered the cost of capital and enabled large scale wind projects, particularly under MidAmerican Energy's utility owned wind buildout. This regulatory framework, rather than statutory mandates, became the primary driver of Iowa's renewable expansion.

State tax incentives for local governments and developers, like the production tax credit and special valuation system, combined with Iowa's strong wind resources, further accelerated development. These policies exemplify the importance of economic development for rural communities, and the potential renewable energy provides. Because Iowa did not adopt a statewide climate policy or binding renewable targets beyond the original RPS, renewable deployment depended on favorable economics, local government acceptance of renewables, and voluntary utility planning rather than long term climate policy obligations. As utility preferences shift and transmission constraints increase, renewable growth has slowed, particularly for new wind projects.

Iowa's decentralized siting structure has become an increasingly important constraint on renewable development. Unlike same states that have consolidated authority at the state level for large-scale renewable projects, Iowa grants primary siting control for wind and solar facilities to county governments through zoning ordinances and conditional use permitting processes. In the early 2000s, when wind development was widely viewed as economically beneficial, this decentralized structure facilitated rapid deployment. However, as local opposition increased and political attitudes shifted, county level discretion became a source of regulatory variability and delay. Because approval processes differ across counties and are influenced by local political dynamics, project timelines and outcomes have become less predictable.

Within the past five years, Iowa's energy policy has increasingly emphasized infrastructure regulation rather than renewable expansion. The Iowa Utilities Commission (formerly the Iowa Utilities Board) continues to regulate electricity generation, transmission, and pipeline infrastructure under a vertically integrated utility model. Recent legislative actions have focused on narrowing commission authority and increasing procedural oversight rather than expanding renewable mandates. This shift was underscored by the 2024 approval of the Summit Carbon Solutions pipeline by the Iowa Utilities Commission, which triggered significant legislative scrutiny and reforms aimed at transparency, land restoration, and regulatory process rather than emissions reduction.[142] These developments signal a transition in Iowa's policy orientation away from aggressive renewable expansion and toward managing infrastructure conflict and regulatory risk. Figure 12 outlines the relative impacts of Iowa's various policies on renewables development within the state.

While utility scale renewable expansion has slowed, recent regulatory actions suggest growing institutional support for distributed generation. In 2023 and 2024, the Iowa Utilities Board adopted updated interconnection standards for distributed energy resources, reducing administrative burdens for smaller systems, and improving transparency around grid constraints and costs. These updates signal a gradual shift toward a more distributed, modular grid architecture, while maintaining regulatory oversight to ensure system reliability and cost transparency.

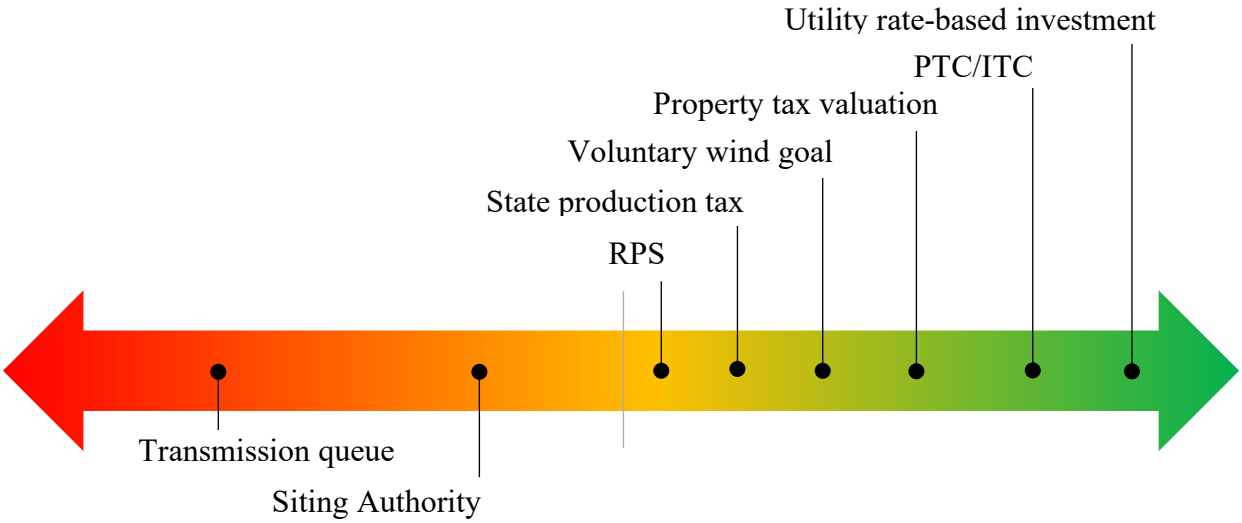

Figure 12. Relative impacts of various policies on renewables development in Iowa. Far right indicates a positive impact; the middle is neutral; and the left is negative. Note that although the Transmission queue and PTC/ITC are not a state policy, it may have some detrimental impacts on renewables and impact the effectiveness of Iowa state policy.

Moving forward, Iowa retains significant room for policy improvement that could better align its abundant renewable resource base with long-term system transformation. Targeted state-level actions, such as updating renewable or clean electricity target, as well as coordinating transmission planning with neighboring states and transmission authorities, would reduce regulatory uncertainty, lower project risk, and unlock currently stalled renewable investment. Additionally, Iowa could take inspiration from states with standardized siting standards (i.e. Michigan) which would allow them to encourage renewable investment and development within the state. Streamlining siting policy and guidance and updating aging grid infrastructure to increase capacity could further enhance utility-scale renewable deployment without fundamentally restructuring Iowa's regulatory model. Without these adjustments, Iowa risks underutilizing its exceptional wind and emerging solar potential, allowing regulatory fragmentation and infrastructure constraints to limit future growth. In this scenario, the state's energy policy would increasingly focus on managing existing assets rather than enabling a full-scale energy system transition, leaving substantial renewable resources effectively stranded despite favorable market and technological conditions.

Iowa's Renewable Energy Recipe: Friendly Fields

Over the years, Iowa's renewable energy development has remained under local control. While the state may implement some state-level policies that promote renewable energy, such as the RPS and an infrastructure loan program, most policies leave the decision on renewable development to individual counties. Iowa's energy recipe mostly follows the "Friendly Fields" recipe; states have

local siting policies, strong local tax benefits, and little to no climate mandates. Although Iowa was the first state to implement an RPS, this policy encouraged economic and energy resiliency, rather than explicit climate change issues. County governments control the zoning and siting of renewable energy in Iowa. Only projects with a nameplate capacity of 25 MW or more require certification at the state level. Additionally, state legislation implements the special valuation system as a tax benefit for local governments for wind energy systems but fails to offer strong tax incentives for solar projects. PUCs play a large role in the renewable energy development of a state, guiding the development of early wind energy growth within the state and serving as the playing field for the state's energy future. PUC policies are signaling a departure from an expansionist renewable agenda and towards a more regulated, infrastructure-focused approach. Energy generation is still a large part of the state's statues and economy, but PUC policies are redefining what these generation technologies look like moving forward.

Although Iowa has pursued a "Friendly Fields" recipe to keep development under local control and benefit communities that welcome renewable energy, their framework has many drawbacks. Some of the most influential policies that previously promoted renewable development addressed state and developer concerns, such as the production tax credit, and did not address local concerns. Furthermore, the lack of clarity in all policies on non-wind renewable energy, such as solar and battery storage, ignores the potential economic development and energy resiliency that could result from increased non-wind development. The lack of strong local tax benefits at the state-level related to non-wind renewables does not align with the energy recipe Iowa seems to prefer and could hinder the utility-scale solar and non-wind renewable development in rural counties. As the county retains control over energy siting, the lack of ordinances of different renewable energy technologies discourages utility-scale development. Pursuing full county control can ensure these communities receive benefits and can choose to allow development, but can lead to counties blocking projects, especially solar, from being built on individually owned land with accepting landowners.

To further strengthen their policy framework, or energy recipe, Iowa legislators could continue to update legislation and provide clarity and specific guidance on all renewable energy technologies. Iowa has not fully explored the potential benefits or development capacity of solar, battery storage, and other renewable energy technologies that are not wind energy. Implementing a strong tax incentive for solar energy, similar to the special valuation incentive for wind energy, could generate additional solar development and local revenue. While this recipe runs the risk of allowing local governments to block projects, local officials generally recognize the immense economic benefits from renewable energy tax incentives and could welcome more renewable energy development in their communities.

If Iowa wants to continue to be an energy leader in the country, state officials must also consider the role of transmission and implement legislation that encourages upgraded infrastructure. Because transmission planning and cost allocation are inherently interstate issues, Iowa cannot address these constraints through local or purely intrastate policies alone. Instead, the state should play a more proactive role within regional transmission organizations, particularly MISO, by supporting long-range, interregional transmission planning that explicitly accounts for renewable generation growth in resource-rich areas such as Iowa. Strengthening coordination between state regulators, utilities, and regional planners would help ensure that transmission investments are aligned with future renewable deployment rather than limited to short-term reliability needs. In addition, Iowa could reduce transmission-related barriers by clarifying state-level siting authority

for high-voltage transmission lines that serve regional or multi-state public benefits. Providing clearer standards for approval, coupled with defined timelines and appealable decisions, would reduce uncertainty for developers and limit the ability of local opposition to stall projects with broader system value. Overall, Iowa's renewable energy policy framework prioritizes local-level economic development and energy resiliency. Iowa has specific policies in place that strongly address the state's concerns but has previously implemented policies that were not as strong. Iowa must tighten their policy recipe and consider transmission and new renewable technology if they hope to continue to increase energy development, grid resilience, and local economic autonomy.

Appendices

Appendix 1. Distinguishing differences between Wind Energy Production Tax *Credit* (476B) and Renewable Energy Tax Credit (476C). [143,144]

	476B	**476C**
Qualified/Eligible Facilities	Must be placed in service between July 1, 2005, and July 1, 2012. Facilities must be approved by the Iowa Utility Board and operational within 18 months.	Must be placed between July 1, 2005, and December 31, 2017. Renewable energy purchased or produced must be generated prior to December 31, 2027.
Eligible Technology	Electricity generated by wind facilities, including electricity sold or used on-site.	Renewable energy including wind, biogas recovery, biomass, methane gas recovery, solar, or refuse. Solar facilities taking this credit cannot claim additional credits.
Tax Credit/Incentive Amount	$0.01/kWh for 10 years after facility begins producing energy.	$0.015/kWh for 10 years after facility begins producing energy.
Electricity Generation	If filed on or after March 1, 2008, nameplate capacity of the facility cannot be less than 2 MW or greater than 30 MW.	Total maximum for wind-generating nameplate capacity is 363 MW. Total maximum for other renewable technologies is 63 MW, with 10 MW reserved for natural gas, methane and landfill gas, or biogas and 10 MW reserved for solar with a generating capacity of 1.5 MW or less. Non-wind facility nameplate capacity may not exceed 60 MW.
Program Capacity	Reached. In 2011, the maximum total program eligibility was reduced from 150 MW to 50 MW.	Available. Originally reached capacity in 2015, but H.F. 645 added an additional 10 MW of utility-owned solar for eligibility.
Tax Credit Application	Tax credits are transferable and may be applied to state's individual income, corporation income, franchise, insurance premium, sales and use, or replacement tax.	Tax credits are transferable and may be applied to state's individual income, corporation income, franchise, insurance premium, sales and use, or replacement tax.

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