

IOWA ENERGY CENTER

2022 ANNUAL REPORT



IOWA
energy office



A LETTER FROM THE DIRECTOR

The Iowa Energy Office and the Iowa Energy Center (IEC) are housed at the Iowa Economic Development Authority (IEDA). The IEC was set to sunset on July 1, 2022. However, thanks to the passage of Senate File (SF) 2325 that was signed into law on March 23, 2022, the IEC's sunset has been extended to 2027.

Numerous grant and loan committee meetings were held in 2022, and the IEC held five board meetings. In August 2022, the IEC Board approved approximately \$1 million in grants to four projects. The projects were quite varied, and the grant recipients span both the public and private sectors. See the Grant Program section of the report for project details.

The Energy Infrastructure Revolving Loan Program (EIRLP), which went into effect July 1, 2021, provided financial support to innovative energy infrastructure projects proposed by businesses in 2022. There is interest by eligible Iowa entities in this loan opportunity and IEDA looks forward to reviewing projects that are presented to the IEC Board in 2023. See the Loan Program section of the report for more details on the EIRLP.

I would like to thank IEDA staff and the IEC Board for yet another collaborative and productive year. I could not be prouder of all that we have accomplished, and I am eager to advance and support impactful energy projects in 2023 and beyond.

Sincerely,

A handwritten signature in white ink, appearing to read "Debi Durham", with a long horizontal flourish extending to the right.

Debi Durham
Executive Director
Iowa Economic Development Authority
Iowa Finance Authority

ABOUT THE IOWA ENERGY CENTER

The Iowa Energy Center (IEC) was created by the Iowa Energy Efficiency Act of 1990 and was managed by Iowa State University (ISU) until October 2017. SF 2325, which was signed into law on March 23, 2022, extended the IEC's sunset date from July 1, 2022 to July 1, 2027 and added carbon management as an additional key focus. The IEC is funded with an assessment on the intrastate revenues of Iowa's gas and electric utilities.

The mission of the IEDA-led IEC is to support projects and programs which align with the following key focus areas:

1. **Energy Workforce Development** – To expand workforce and career opportunities for workers in the energy sector to ensure that the state is able to attract and train professionals to meet the state's future energy needs.
2. **Technology-based energy Research and Development** – To support technology based-development by encouraging public-private partnerships and innovative manufacturers to develop and bring to market new energy technologies.
3. **Support for Rural and Underserved Areas** – To support rural and underserved areas and vulnerable populations by creating opportunities for greater access to energy efficiency expertise, training, programs and cyber security preparedness for small utilities.
4. **Natural Gas Expansion in Underserved Areas** – To support the expansion of natural gas infrastructure to rural and underserved areas of the state where the absence is a limiting factor to economic development.
5. **Biomass Conversion** – To promote and fund research, development and commercialization of biomass technology to benefit the state economically and environmentally by further realizing the value-added attributes of biomass in the development of bioenergy, biofuels and biochemicals.
6. **Alternative Fuel Vehicles** – To encourage growth of the alternative fuel vehicle market, particularly for electric vehicles, and the infrastructure necessary to support the market.
7. **Electric Grid Modernization** – To support efforts to modernize the electric grid infrastructure of the state to support increased capacity and new technologies.
8. **Carbon Management** – To support research and development of strategies for carbon management.

The 13-member IEC Board of Directors is appointed by the Governor. Each of the following entities or groups has one representative on the Board: Iowa State University, the University of Iowa, the University of Northern Iowa, Iowa's private colleges and universities; Iowa's community colleges, IEDA, the Iowa Department of Transportation, the Office of Consumer Advocate, the Iowa Utilities Board, Rural Electric Cooperatives, and Municipal Utilities. Investor-Owned Utilities have two representatives on the IEC Board of Directors.

IOWA ENERGY CENTER BOARD ROSTER

Sector	Board Member	Org./Institution/Company	Term Ends
Academia	Dan Nickey (G)	University of Northern Iowa	6/30/2023
	Vacant	Iowa State University	TBD
	Craig Just (L)	University of Iowa	6/30/2026
	Scott Stokes (L)	Iowa Lakes Community College	6/30/2026
	Vacant	Iowa Private College/University	TBD
Government	Debi Durham	Iowa Economic Development Authority	6/30/2025
	Geri Huser	Iowa Utilities Board	6/30/2023
	Jennifer Johnson (G)	Office of Consumer Advocate	6/30/2023
	Stuart Anderson** (L)	Department of Transportation	6/30/2023
Utilities	Terry Kouba	Alliant Energy	6/30/2025
	Matt Washburn (G)	Northwest Iowa Power Cooperative	6/30/2026
	Kelcey Brown (L)	MidAmerican Energy	6/30/2025
	Troy DeJoodé* (L)	Iowa Association of Municipal Utilities	6/30/2025

*Elected Board Chair in 2022

**Elected Board Vice-Chair in 2022

(G) Serves on the Grant Committee

(L) Serves on the Loan Committee

The Board's main responsibilities include:

- Providing direction regarding policies, procedures, and programs.
- Reviewing and approving loan and grant applications. To ensure that IEC Board leadership is rotated and that all Board members have an opportunity to serve on either the grant or loan committee, during the September Board meeting, the members had the opportunity to volunteer to be selected or reappointed by their peers to serve on grant and loan committees as denoted in chart above. The committee members were instrumental in the development of program administrative rules. Once the grant and loan programs opened in 2020, committee members assisted IEDA staff with reviewing applications and making award recommendations to the full Board.
- Assisting IEDA in the development and approval of the IEC's budget.

The IEDA is required to provide an annual IEC report to the General Assembly by January 15 each year.



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EMERGENCY STOP

2022 IEC ACTIVITIES

Five Board meetings were held in 2022. The Board meetings are typically held on a quarterly basis and are open to the public. Meeting agendas and minutes can be found on IEDA's website. The Board meetings provide not only the setting to review and approve grant and loan awards, but an opportunity for Energy Office staff to provide pertinent updates on IEDA-led energy initiatives and invite external presenters to share information on energy challenges / opportunities and innovative projects / initiatives, either ongoing or planned in Iowa. The presentations and discussions are intended to be both informative and to prompt additional project ideas and potential future partnerships and collaboration.

In addition to five board meetings held, there were several positive and impactful activities in 2022 including:

- In March, Governor Reynolds signed SF 2325 into law, extending IEC's sunset date to July 1, 2027, and adding carbon management to the list of key focus areas.
- A successful grant funding round which included a robust and diverse mix of energy resources and applicants as described in this report.
- The Energy Infrastructure Revolving Loan Program (EIRLP) supported innovative energy infrastructure projects proposed by businesses this past year.
- In May, Troy DeJooode with the Iowa Association of Municipal Utilities was re-elected as the Board chair. In November, Stuart Anderson with the Iowa Department of Transportation was elected vice chair.

GRANT AND LOAN PROGRAM OVERVIEW

The IEC's financial resources provide support via two pathways:

1. Grant funds that may be issued for eligible projects and programs. Applications are submitted by Iowa businesses, colleges and universities and private nonprofit agencies and foundations and are scored on a competitive basis. Eligible grant-funded projects must align with one of the eight key focus areas of the Iowa Energy Plan. Projects must also provide a benefit for Iowa ratepayers.
2. The Energy Infrastructure Revolving Loan Program (EIRLP), which opened for applications in October 2021, replaced a previous energy loan program, the Alternate Energy Revolving Loan Program (AERLP). The EIRLP provides low-interest loans for energy infrastructure projects that facilitate electricity or gas generation, transmission, storage, or distribution.

IOWA ENERGY CENTER GRANT PROGRAM

The IEC Grant Program provides grant funding to Iowa businesses, colleges and universities and private nonprofit agencies and foundations. Eligible grant-funded projects must align with one of the eight key focus areas of the Iowa Energy Plan. Projects must also provide a benefit for Iowa ratepayers.

2022 Grant Activity

Administrative Rules for the IEC Grant Program were approved and went into effect in March 2019. The Grant Committee recommended an updated Policies and Procedures Handbook, which the IEC Board adopted in November 2021. These two documents govern how IEDA staff and IEC Board members manage the IEC Grant Program.

The grant program opened for pre-applications on February 21, 2022. The launch was communicated by a press release posted on the IEDA website and on IowaGrants.gov. All applicants were required to submit a pre-application via IowaGrants.gov to be considered for funding. By the end of the pre-application period, 51 pre-applications were received with funding requests totaling over \$14 million.

The IEC Grant Committee then met to review and score each pre-application, taking IEDA staff recommendations into consideration. The minimum score to move forward with a full application during the most recent round of funding was 30 out of 37. After review, 13 pre-applications scored high enough to move forward to the full application phase. Two applicants elected not to proceed with a full application. The IEDA Grant Committee reviewed and scored 11 full applications, with funding requests totaling just under \$3.5 million. A minimum score of 150 out of 188 was necessary to be considered for funding by the IEDA Board. Four applications totaling over \$1 million in requests that met the minimum score were approved by the IEC Board in August 2022.

2022 GRANT PROGRAM RECIPIENTS

Grant Title	Recipient Organization	Project Summary	Award Amount
Recycling of Used and End-of-Life Li-Ion Batteries to Extract Lithium, Anode and Cathode Materials	Iowa State University	The project aims to develop a scalable recycling process for sustainable recovery of critical materials from used Lithium-Ion batteries.	\$347,530
Mining Smart Meter Data for Modeling and Mitigating EV Charging Impacts on Distribution Grids	Iowa State University	The project will model EV charging impacts on distribution systems for better infrastructure planning and operation.	\$203,342
Continuous Thermal to Electrical Energy Harvesting from Industrial and Residential Waste Heat	Legov Systems Group	The project will focus on the scale up of an energy harvester for continuous operation and pilot scale testing.	\$301,000
Laser Surface Engineering of Natural Gas Pipelines for Extended Service Life	Iowa State University	The project looks to develop laser surface engineering technologies to extend pipeline's service life.	\$200,000

The IEC plans to launch round five of grant funding in February 2023. Funding decisions will be made at the August 2023 Board meeting.

IOWA ENERGY CENTER LOAN PROGRAMS

Alternate Energy Revolving Loan Program (AERLP) Activity

The AERLP has provided zero-interest loans for the construction of qualifying Alternate Energy Production facilities since its inception in the late 1990s. IEDA currently administers 65 AELRP loans which have not yet reached their maturity date of the term “inherited” from ISU when the IEC was transferred to IEDA. IEDA administers ten AERLP loans which were approved by the IEC board after the IEC was transferred to IEDA.

2020 AERLP LOANS

Organization	Project Summary	Award
Ryan Wangsness	36 kW solar project for chicken production operation, Decorah IA	\$38,887.50
Sievers Family Farms	155 kW solar project for beef cattle and grain production	\$149,200

Energy Infrastructure Revolving Loan Program (EIRLP)

The Energy Infrastructure Revolving Loan Program provides low-interest loans for energy infrastructure projects that facilitate electricity or gas generation, transmission, storage, or distribution. Eligible applicants are businesses, municipal utilities, and rural electric cooperatives.

The new program’s purpose is to support:

- Energy infrastructure development
- Electric grid modernization
- Energy-sector workforce development
- Emergency preparedness for rural and underserved areas
- Expansion of biomass, biogas and renewable natural gas
- Innovative technologies
- Development of infrastructure for alternative fuel vehicles

The program was created through enactment of Senate File 619 Division XII in the 2021 legislative session. Administrative rules, policies and procedures were approved and went into effect in September 2021. Updates to the policies and procedures handbook were developed by IEDA staff and the Loan Committee and subsequently adopted by the IEC Board in November 2022. The program can cover up to 75% of project costs and offers a 2% interest rate.

There were four quarterly EIRLP application cycles in 2022. Three applications were received and reviewed by IEDA staff and the IEC Loan Committee. One was withdrawn and two were approved.

2020 AERLP LOANS

Organization	Project Summary	Award
Mission Green LLC	Innovative demonstration project including bi-facial solar panel canopy with a pergola, and electric heat pumps in Decorah, Iowa	\$236,250
Accu Steel Inc	Integration of thin solar panels into fabric building prototype in Audubon, Iowa	\$193,000

Other potential applicants cited inflation and supply chain challenges for delaying submitting applications for project financing through the program. The IEC anticipates that municipal utilities will submit applications for funding for projects that will modernize their electric infrastructure and improve resilience.



FINANCIAL REPORTS

AERLP FINANCIAL REPORT

Funding	Projects (Loans)	Loans Receivable
Available (July 1, 2021)	\$14,404,126	\$2,989,820
Repayments Received (July 1, 2021 thru June 30, 2022)	\$1,226,799	(\$1,226,799)
Interest Earnings	\$32,663	
Obligations (June 30, 2022)	(\$585,060)	
Expenses (July 1, 2021 thru June 30, 2022)	(\$94,925)	
Loans Receivable Balance (June 30, 2022)		\$1,763,021
Funding Available (June 30, 2022)	\$14,983,603	

IOWA ENERGY CENTER FINANCIAL REPORT

FUNDING	Total
Balance (July 1, 2021)	\$20,482,320
Interest Earnings	\$55,079
	\$20,537,399
OBLIGATIONS/PAYMENTS	Total
Obligations Paid (as of June 30, 2022)	(\$1,488,138)
Remaining Obligations	(\$6,396,261)
Administrative Expenses	(\$212,671)
	\$12,490,329

NOTES:

- 1) Funding for IEDA programs under the Iowa Energy Center sunsets as of June 30, 2022 per 2017 Acts, Chapter 169 Section 37.
- 2) Per 2018 Acts Chapter 1172 Section 91, some of the funding available for Iowa Energy Center programs is transferred to the General Fund of the State as outlined below (assumes a IUB transfer of \$4.25 million each year).



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