

**State of Iowa
Energy Center Board
Meeting Minutes of February 23, 2023
at IEDA, 1963 Bell Avenue, Suite 200
Helmick Conference Room
Des Moines, Iowa
Or Via Teams Webinar**

Call to order 1:00 p.m.

Board Members Present

Troy DeJooode, Board Chair
Stuart Anderson, Board Vice Chair
Jennifer Johnson
Debi Durham
Craig Just
Geri Huser*
Dan Nickey*
Kelcey Brown*
Terry Kouba*
Matt Washburn*

Absent

Scott Stokes

Iowa Economic Development Authority Staff Present

Brian Selinger
Amber Buckingham
Stephanie Weisenbach
Terry Roberson
Lisa Connell
Kanan Kappelman
Staci Hupp-Ballard
Rob Christensen
Betty Hessing
Shelly Peterson*
Abbie Christophersen*
Emily Hockins*
Deanna Triplett*
Vicky Clinkscales*

Iowa Finance Authority Staff Present

Michael Thibodeau, Iowa Finance Authority*
Dave Powell, Iowa Finance Authority*
Samantha Askland, Iowa Finance Authority*
Tim Morlan, Iowa Finance Authority*

Others Present

Chaz Allen, Iowa Utility Association
A. Johnson, Citizen
Brandon Halverson, Guest*
Laura Skogman, McGough Construction*

Heather Hackbarth, Iowa Dept. of Management*
Jeff Gorrie, Iowa Association of Municipal Utilities*
Jonathan Haas, ICF*
Wanda Woodley, City of Hawarden*
Carol Hoogestraat, City of Hawarden*
Jacob Grobe, Guest*
Brenda Biddle, Iowa Utilities Board*

*Participated via Teams

Welcome & Introductions by Board Chair Troy DeJooode

Troy DeJooode welcomed everyone to the February 23rd IEC Board meeting.

Roll Call

Betty Hessing did roll call and a quorum was established.

Consideration of November 17, 2022 IEC Board Meeting Minutes

Motion by	Stuart Anderson
Motion	I move approval of the November 17, 2022 IEC Board meeting minutes as presented.
Second	Craig Just
Voice Vote	All ayes in favor. Motion approved.

Fiscal Update – Attachment A

Terry Roberson explained we have just over \$11.3 million available to grant out at the current time. On the Energy Infrastructure Loan Program, we have almost \$14M and it looks like we have a loan termination and will recapture from the old loan program today. We also have new loans on the agenda today so that will make the balance go down. Not much new on old loan program. Terry Roberson stated he would be happy to answer any questions, but no questions were asked.

Competitive Grant Program Update – Amber Buckingham

Amber Buckingham reported that if everything goes well, we will be launching the fifth round of competitive grant applications this afternoon. The pre-application due date will be March 23rd. Those applicants who are invited for the full application phase, those will open in May of 2023 and the funding decisions will be made at the August Board meeting.

For the existing grants, starting with the May Board meeting, we will have a grant recipient at most, if not all, of our Energy Center Board meetings to discuss the progress on their grant projects. Due to some delays, we just finished-up the grant visits for our existing grants. At the May meeting we will have an Annual Report for your review.

Amber Buckingham asked if there were any questions; no questions were asked.

Grant Program Policies and Procedures Handbook – Attachment B

Amber Buckingham explained the Iowa Energy Center (IEC) Grant Program Policies and Procedures Handbook provides guidelines for the administration of

the IEC Grant Program. As established by 261 Iowa Administrative Code 404.2, the Board must review the Grant Program Policies and Procedures Handbook annually.

The IEC Grant Committee members met in January to discuss potential changes to the Policies and Procedures Handbook for the fifth round of grant applications. Changes for the next round of applications include but are not limited to the following: updates to reporting requirements, clarification regarding eligibility of projects and updates to the scoring matrix for both the pre-application and full application phase. These changes will strengthen the Grant Program and provide clearer guidance to applicants and grant recipients.

We increased the number of points in both the pre-application and full application phase and we increased the points necessary to move on and be funded. Other things were just the dates that reports are due and some eligibility regarding private asset development.

Our recommendation would be to approve the Policies and Procedures Handbook for the Fifth Round of Competitive Grant Program Funding.

Motion by Debi Durham
Motion I move to approve the Policies and Procedures Handbook for the Fifth Round of Competitive Grant Program Funding.

Second Jennifer Johnson
Roll Call Yes: 10 Abstain: 0
Motion approved.

Grant Modification Request for 20-IEC-007 – Iowa State University – Strategies for Building Soil Carbon and Generating Carbon Negative Energy in Iowa Counties – Attachment C

Amber Buckingham stated the Iowa Economic Development Authority received a request from Iowa State University to extend the agreement end date for Project 20-IEC-007 to May 31, 2023.

The above referenced agreement was made to Iowa State University with an agreement end date of March 31, 2022. An initial no cost extension was requested by Iowa State University and approved by staff in January 2022. This extension was granted for one year, extending the agreement end date to March 31, 2023. The PI had some difficulty hiring research assistants to assist with finishing the project and completing the necessary reports. The PI was recently able to hire two research assistants and feels that the two-month extension will enable them to complete the final deliverable and final report. The overall budget for this project will not change.

Staff recommends approving the second no cost extension, changing the agreement end date from March 31, 2023 to May 31, 2023.

Chairperson DeJode asked if there were questions; no questions were asked.
Motion by Craig Just

Motion I move to approve the second no cost extension, changing the agreement end date from March 31, 2023 to May 31, 2023 for 20-IEC-007.
Second Debi Durham
Roll Call Yes: 10 Abstain: 0
Motion approved.

Grant Modification Request for 20-IEC-017 – Iowa State University (ISU) – Low-Cost Biobased Composite Material for Ultra Durable and Recyclable Wind Turbine Blades - Attachment D

Amber Buckingham stated Iowa State University (ISU) has requested a budget modification amendment for award 20-IEC-017.

The PI has indicated the need to reallocate funds within the approved budget to support costs relevant to the proposed research activities, such as supporting a part-time post doc, supply costs and tuition. They have requested to move the funds from Other Direct Costs, Student Tuition, and Supplies and Materials to Honoraria and Services. It is about \$50,000, but it does not impact the overall grant request, which remains unchanged at \$450,436.

Administrative Rule 261 IAC 404.7(7)(a) provides that any substantive change to a funded IEC project, including time extensions, budget revisions, and alterations to proposed activities, will be considered an agreement amendment. As this request is over \$10,000, Board approval is necessary.

Staff recommendation is to approve the amendment to 20-IEC-017; moving the requested funds from Other Direct Costs, Student Tuition and Supplies and Materials to Honoraria and Services.

Chairperson DeJoode asked if there were questions; no questions were asked.

Motion by Stuart Anderson
Motion I move to approve the amendment to 20-IEC-017, moving the requested funds from Other Direct Costs, Student Tuition and Supplies and Materials to Honoraria and Services.
Second Craig Just
Roll Call Yes: 10 Abstain: 0
Motion approved.

Grant Modification Request for 21-IEC-009 – Iowa State University – Micro-DERMS: DER Management System for Real-Time Monitoring and Control of Networked Mobile-Microgrids and DER-Integrated Distribution Grids – Attachment E

Amber Buckingham stated Iowa State University has requested a grant modification for award 21-IEC-009.

Due to an administrative issue, the originally named Principal Investigator (PI), Dr. Gelli, was unable to continue his role in the project research and Iowa State University requested that Dr. Anne Kimber, the former Co-PI, be named lead PI in a previous amendment request. The aforementioned administrative issue has now been resolved and Dr. Gelli can return to the role of PI. ISU would like to

transition the PI role to Dr. Gelli effective immediately. Dr. Kimber will resume her role as Co-PI on the project. The end date for the project is October 4, 2024.

Administrative Rule 261 IAC 404.7(7)(a) provides that any substantive change to a funded IEC project, including time extensions, budget revisions, and alterations to proposed activities, will be considered an agreement amendment. Staff considers this amendment to be substantive and requires Board approval.

Staff recommends approving the change of PI for 21-IEC-009, which will be effective as of February 23, 2023.

Chairperson DeJoode asked if there were questions; no questions were asked.

Motion by Debi Durham
Motion I move to approve the grant modification request for 21-IEC-009.
Second Stuart Anderson
Roll Call Yes: 10 Abstain: 0
Motion approved.

Loan Program

Loan Termination Request from Ryan Wangsness – 20-AEL-009 – Attachment F

Stephanie Weisenbach stated this item is related to the previous Loan Program—the Alternate Energy Revolving Loan Program and it is a termination of a loan agreement requested by the recipient, Ryan Wangsness. This was a solar project that the Board approved in May of 2021 for \$38,877.50. The project was delayed and he ultimately wanted to utilize other financing. We have not disbursed any funds and they did not provide any collateral.

Staff recommendation is to approve IEDA Execution of a Termination Agreement with Ryan Wangsness.

Motion by Geri Huser
Motion I move to approve IEDA's Execution of a Termination Agreement with Ryan Wangsness.
Second Craig Just
Roll Call Yes: 9 Abstain: 1 (Washburn)
Motion approved.

Energy Infrastructure Revolving Loan Program (EIRLP) – EIRLP Update –

Stephanie Weisenbach stated the Energy Infrastructure Revolving Loan Program received six applications in this quarterly cycle totaling approximately \$5.4M in requests. Since this new and revised program opened in the Fall of 2021, this is the highest amount requested from the program that we have seen in one quarter. We have also received our first application from a municipal utility, and you may recall we added municipal utilities as an eligible borrower in the program. Our staff, both from IEDA and IFA, conducted due diligence and reviewed all the applications, which included but is not limited to financial evaluation and project cash flow research on the proposed collateral and utilization of the program's evaluation criteria that we have in our Policies & Procedures.

The IEC Loan Committee, comprised of Board Members, met last week and their recommendations are provided in Board Papers.

Ms. Weisenbach asked if there were questions; no questions were asked.

Energy Infrastructure Revolving Loan Program Loan Application Request – City of Hawarden – Attachment G

Stephanie Weisenbach explained for this particular loan application, we have an abstaining Board Member. Chair DeJoode stated he would abstain and turn over administrative duties to Vice Chair Anderson.

Stephanie Weisenbach stated our first loan application is for the City of Hawarden and they are requesting a maximum loan amount for the program, which is \$2,500,000 for a 9-year term. The recommendation is to approve this application and this municipal utility plans to complete a new larger substation, which replaces their current substation that has reached the end of its useful life and does not have the capacity to serve the planned growth of the community. The new substation will improve reliability, serve the increasing load in the community, and include SCADA (Supervisory Control and Data Acquisition) so they can monitor and control the system. The total project cost is estimated at \$5,997,600 per the engineer, but it may change after the City goes out to bid. Financing through EIRLP will reduce the costs of borrowing from solely bond financing at a higher interest rate and utilizing their reserve fund to help cover project costs, which the city needs to maintain for repairs and emergencies.

The recommendation from the Loan Committee is to approve the full requested loan amount of \$2,500,000 for a 9-year term at the 2% interest rate established in the program's policies and procedures.

Matching funds will come from bond financing and also the Sioux County Board of Supervisors. Those amounts will be finalized after the City goes out to bid for the project. We will also be requiring that they document those commitments prior to our disbursement of funds per our procedures and agreements requirement.

The Energy Infrastructure Revolving Loan Program requires projects to fulfill at least one of the program purposes in Iowa Code. This project most aligns with purposes of the electric distribution and electric grid modernization. The program also requires projects to fulfill at least one of three evaluation criteria. This project demonstrates characteristics of broad-reaching benefits to the state, local community and/or utility ratepayers, which is required for loans over \$1M.

The project will improve resiliency and expand capacity through a larger substation. The City's ability to convey the reliability of utilities is an economic development tool and additional load in the community is planned due to the expansion and location of new facilities. This includes an \$11.2 million expansion of the Hawarden Regional Hospital which serves the region with health care services and all the area 911 calls, their grain elevator, high school, and a potential future expansion of food processor and pet food producer—

Dakota Treats. The whole community will benefit from this improved infrastructure. Over half of the population is below the low-to-moderate income threshold and the loan will ease the pressure to increase rates to cover the project.

Utility revenues are the pledged security for the loan. Municipalities have limited security available for debt service based on Iowa Code. IEDA will work with the city's bond counsel to structure the loan agreement's collateral to be in compliance with Iowa Code. They are looking to complete the project in the Fall of next year.

Stephanie Weisenbach stated the recommendation from the Loan Committee is to approve the loan and she asked if there were any questions.

Motion by Geri Huser
Motion I move to approve the full requested loan amount of \$2,500,000 for a 9-year term at the 2% interest rate established in the program's policies and procedures.

Second Debi Durham
Geri Huser wanted to know the intent of the Grant Program to provide for general substation upgrades; are we anticipating more projects that are similar to this? It would seem to me you would have a whole lot of municipalities who would apply that would be eligible.

Stephanie Weisenbach replied it was demonstrated that this was more than just improving their existing condition due to the expansion and also the supervisory control and data acquisition monitoring controls piece. Knowing that certain projects may have more demand, we have within our Policies & Procedures that if the Board wanted to try and create some allocations or limitations of certain project types, you could do that. Stuart Anderson stated that was a question that was discussed at committee level and we still felt comfortable with the recommendation to approve.

Geri Huser stated she appreciated Mr. Anderson's response and that she does not sit on either committee, so sometimes she has questions about what the program looks like moving forward and appreciates the information. Debi Durham stated it was a great question because it truly could open the door.

Roll Call Yes: 9 Abstain: 1 (DeJoode)
Motion approved.

Stephanie Weisenbach explained the next series of applications on the agenda all start with the phrase "Red Lion" and this is because they have common ownership within the projects specific LLC's that were formed by the Iowa based company, "Red Lion Renewables", so we wanted to have this explained first before we went into each application and the recommendation. As you may know, it is common in the energy industry for project specific LLC's to be set-up in this way for totally separate and distinct projects. When the Loan Committee

met, it was determined to limit the total amount that could be loaned to a common owner, which would reduce risk to the Energy Center and the three applications selected by the Committee for recommendation to the Board, demonstrated broad reaching benefits for the program in addition to creative or innovative approaches which are part of the evaluation criteria. The applications have some similarities and I will expand on some of those characteristics in more detail for the first one and then summarize it for the remainder due to some duplicative information.

Energy Infrastructure Revolving Loan Program Loan Application Request – Red Lion Albia Schools Solar LLC – Attachment H

Stephanie Weisenbach moved into the first application, which is Red Lion Albia Schools Solar LLC. The electric utility for this project area is Chariton Valley Electric Cooperative. They plan to complete and own a solar plus battery storage project and execute a Power Purchase Agreement with Albia Community School District. The project will add 174 kW of solar arrays at 7 school facilities, mostly rooftop arrays with one ground mount next to a greenhouse. It also includes a battery system at the high school to offset some peak demand and associated demand charges. The total project cost is about \$1.1M so that makes the loan share of this small for the overall project cost.

The other financing source is coming from investors in the project, both from the company Red Lion Renewables and investors they have identified for the project. As soon as they would receive loan approval, they would work to confirm those and have that information, which is required for disbursement of funds.

Their source for their match is subject to some adjustment if they get a grant from USDA for the project, but they have provided assurance that they will move forward without the grant if they don't get it and they also have additional reserves that they use for the project cash flow as needed in order to keep the project going.

They are also planning on some incentives—the Federal Investment Tax Credit and USDA REAP grant, which hasn't been secured, but they say they could move forward without it.

For the program purpose and eligibility of the project, this would align with electric generation, which is listed in Iowa Code for the program and in terms of the evaluation criteria, it fulfills a couple of those for the broad-reaching benefits aiming that for the school district as well as providing some STEM curriculum opportunities and savings to the school district.

The creative or innovative approach is demonstrated through the use of battery storage system programmed to reduce demand spikes and associated charges. Battery storage is in early stages of adoption in Iowa, and this may be the first battery storage system within a K-12 school district.

Three types of collateral are pledged to secure the loan for this project. They are:

1. Power Purchase Agreement (PPA) assignment with associated revenues;
2. UCC on solar and battery equipment;
3. Corporate guaranty from Red Lion Renewables LLC (owner company of project LLC).

Stephanie Weisenbach stated they are looking at the Fall of 2024 for completion of the project.

Motion by	Debi Durham
Motion	I move to approve the loan request of \$186,000 for a 15-year term for Red Lion Albia Schools Solar LLC.
Second	Craig Johnson
Roll Call	Yes: 9 Abstain: 1 (Washburn)
	Motion approved.

Energy Infrastructure Revolving Loan Program Loan Application Request – Red Lion Dallas Center Solar LLC – Attachment I

Stephanie Weisenbach explained the Red Lion Dallas Center Solar LLC loan request of \$323,000 for a 15-year term. We did work with our staff in the underwriting area to review the cash flows for these as well. This project will be executing a power purchase agreement with the City of Dallas Center. The project will add solar arrays at 10 city-owned facilities, including an integrated solar canopy along the Raccoon River Valley Bike Trail and would also be part of a planned amphitheater and park space for the City. The total project cost is \$1,546,000. The electric utility for this project area is MidAmerican Energy.

Funding sources are similar structure to the previous ones and they have also assured that the project could move forward without the USDA grant and they would get started on it right away.

The program purpose and eligibility criteria would be broad-reaching benefits to the state, local community and/or utility ratepayers and also the creative or innovative approach through the solar canopy which would attract 30,000 cyclists per year. The collateral is the same as the last one and similar timeframe as the previous one.

After discussion with Board Members, it was determined the amphitheater is not included in the \$1.5M, but the loan cost does include the solar canopy on the amphitheater, along the bike trail.

Motion by	Geri Huser moved to approve, based on the above information.
Motion	I move to approve the loan request of \$323,000 for a 15-year term for Red Lion Dallas Center Solar LLC.
Second	Debi Durham
Roll Call	Yes: 9 Abstain: 1 (Brown)
	Motion approved.

Energy Infrastructure Revolving Loan Program Loan Application Request – Red Lion Wapello Schools Solar LLC – Attachment J

Stephanie Weisenbach explained the Red Lion Wapello Schools Solar LLC is a loan request for \$584,000 for a 15-year term. This is a project to work with the

Wapello Community School District for 678 kW of solar arrays on rooftops of three facilities and a solar canopy carport covering at the elementary school drop off zone. The total project cost is \$2,206,000. The electric utility for this project area is Alliant Energy.

The project was initially inspired by a group of fifth and sixth graders in the school's Lego League where they researched and presented this particular idea along with energy efficiency. Their project was actually awarded in a regional competition.

The funding sources are structured similar to the previous ones. Again, they are clear that they can move forward if they do not receive the USDA grant and we will get that documentation before disbursement if approved for the program.

The purpose and eligibility include broad-reaching benefits related to the school and the Lego League and the overall savings to the school district and the community it serves. The collateral is the same as the other projects, as well as a similar implementation timeframe.

Debi Durham stated this was a great project and she loved that the students were involved.

Motion by	Debi Durham
Motion	I move to approve the loan request of \$584,000 for a 15-year term for Red Lion Wapello Schools Solar LLC.
Second	Jennifer Johnson
Roll Call	Yes: 9 Abstain: 1 (Kouba)
	Motion approved.

Energy Infrastructure Revolving Loan Program Loan Application Request – Red Lion Creston Schools Solar LLC – Attachment K

Stephanie Weisenbach stated she will briefly go through these last two, which were recommended for denial.

The Red Lion Creston Schools Solar LLC—the loan request was quite a bit higher and when the Loan Committee reviewed all the applications, it was preferable to go with the other three and be able to reach more across the State. This amount and the project itself did not score as high for that reason. The electric utility for this project is Alliant Energy.

One unique thing they would like to do is integrate battery storage into the solar project at the school and they may continue to try to put the project together, but they were not as confident about moving forward with the project without the REAP grant.

The Loan Committee recommends denying this application due to recommending approval of other applications with common ownership.

Motion by	Debi Durham
Motion	I move to deny the loan request of \$1,381,000 for a 15-year term for Red Lion Creston Schools Solar LLC.
Second	Craig Just

Roll Call Yes: 9 Abstain: 1 (Kouba)
Motion approved.

Energy Infrastructure Revolving Loan Program Loan Application Request – Red Lion Knoxville Waterworks Solar LLC – Attachment L

Stephanie Weisenbach explained the Red Lion Knoxville Waterworks Solar LLC was a \$467,000 request for a 15-year term and the recommendation from the Committee is to deny it, tying back to that common ownership and this one did not score as high. There was not anything particularly innovative or creative about the approach to this one, aside from general benefits and savings anticipated for the Knoxville Waterworks, which is tied to the local community.

Chairperson DeJoode stated he will need to abstain on this one so Stuart Anderson took the reigns as Vice Chair.

Motion by Matt Washburn
Motion I move to deny the loan request of \$467,000 for a 15-year term for Red Lion Knoxville Waterworks Solar LLC.

Second Debi Durham
Roll Call Yes: 8 Abstain: 2 (DeJoode & Brown)
Motion approved.

Electric Network Disaster Mitigation for Utilities in Rural Communities – Grant Recipient from ISU

Amber Buckingham stated that she expected to introduce Dr. Alice Alipour with Iowa State University, but due to difficulties caused by the ice storm/snowstorm yesterday, she is not able to attend. She will be presenting her work on the “Disaster Mitigation for Utilities” at our May Board meeting.

Geri Huser & Kelsey Brown had to leave the meeting.

Iowa Wastewater and Waste to Energy Research Program – Attachments M & N

Craig Just with the University of Iowa, made a presentation on the “Iowa Wastewater and Waste to Energy Research Program”.

Other Business

Troy DeJoode turned it over to Brian Selinger to give Energy Office updates.

Energy Center Office Updates

Brian Selinger stated we have some expiring Board terms coming-up on June 30th. Those members include Stuart Anderson, Dan Nickey, Geri Huser and Jennifer Johnson. Naturally, we would love to have you folks continue being on the Board, but we know that is your individual decision and some things have to be vetted through your management. Iowa State University has identified a Board replacement for the seat Gul Kremer held. We are waiting Boards and Commissions approval of that. Private colleges and universities—they are trying to find an applicant to replace Jenae Sikkink. We hope to have a full complement of Board Members by the May Board meeting.

Public Comment Period No public comments.

Chairperson DeJoode asked for a motion to adjourn the meeting.
Motion by Stuart Anderson
Motion So move to adjourn the meeting.
Second Debi Durham
Voice Vote All ayes in favor. Motion approved.

Adjournment 2:18 p.m.

Respectfully Submitted,
Betty Hessing, IEC Board Administrator

ATTACHMENT A

IEDA				
Financial Report				
Iowa Energy Center				
Fiscal Year 2023				
January 31, 2023				
	IEC MAIN ACCT			
			Total	
	Admin	Projects	Fund	
<u>Revenue</u>				
Cash Balance Forward	275,000	18,561,590	18,836,590	
FY21 IUB Transfer	0	0	0	
Principal Repayments YTD	0	0	0	
Interest Revenue	0	148,434	148,434	
Other Revenue YTD	0	0	0	
Deappropriations	0	0	0	
Transfers	0	0	0	
Total Revenue YTD	275,000	18,710,024	18,985,024	
<u>Expenses</u>				
Administration YTD	(76,339)	0	(76,339)	
Project Payouts YTD	0	(1,079,125)	(1,079,125)	
Leg Auth Transfers (18 Acts Ch 1172 Sec 91)			0	
Total Expense YTD	(76,339)	(1,079,125)	(1,155,464)	
<u>Obligations</u>				
Obligations C/F	0	6,346,261	6,346,261	
Current Year Obligations	0	1,051,872	1,051,872	
Current Year Rescissions			0	
Current Year Payouts	0	(1,079,125)	(1,079,125)	
Balance of Current Year Admin	198,661	0	198,661	
Net Obligations YTD	198,661	6,319,008	6,517,669	
Balance Available	0	11,311,891	11,311,891	

IEDA				
Financial Report				
Iowa Energy Center				
Fiscal Year 2023				
January 31, 2023				
	ENERGY INFRASTRUCTURE REVOLVING LOAN PROGRAM			
				Total
	Admin	Projects		Fund
Revenue				
Cash Balance Forward	250,000	14,157,520		14,407,520
FY21 IUB Transfer	0	0		0
Principal Repayments YTD	0	0		0
Interest Revenue	0	112,636		112,636
Other Revenue YTD	0	0		0
Deappropriations	0	0		0
Transfers	0	0		0
Total Revenue YTD	250,000	14,270,156		14,520,156
Expenses				
Administration YTD	(16,328)	0		(16,328)
Project Payouts YTD	0	(397,150)		(397,150)
Leg Auth Transfers (18 Acts Ch 1172 Sec 91)				0
Total Expense YTD	(16,328)	(397,150)		(413,478)
Obligations				
Obligations C/F	0	236,250		236,250
Current Year Obligations	0	160,900		160,900
Current Year Rescissions				0
Current Year Payouts	0	(397,150)		(397,150)
Balance of Current Year Admin	233,672	0		233,672
Net Obligations YTD	233,672	0		233,672
Balance Available	0	13,873,006		13,873,006

IEDA					
Financial Report					
Iowa Energy Center					
Fiscal Year 2023					
January 31, 2023					
OLD					
IEC/AEL LOAN ACCT					
			Total		
		Projects	Fund	IEDA	OCT 1 2017
				NOTES REC	NOTES REC
<u>Revenue</u>					
Cash Balance Forward	0	1,174,610	1,174,610	1,044,667	718,354
FY21 IUB Transfer	0	0	0		0
Principal Repayments YTD	0	288,574	288,574	(169,332)	(119,242)
Interest Revenue	0	9,102	9,102		0
Other Revenue YTD	0	0	0		0
Deappropriations	0		0		0
Transfers	0	0	0		0
Total Revenue YTD	0	1,472,286	1,472,286	875,335	599,112
<u>Expenses</u>					
Administration YTD	0	0	0		
Project Payouts YTD	0	0	0		
Leg Auth Transfers (18 Acts Ch 1172 Sec 91)			0		
Total Expense YTD	0	0	0		
<u>Obligations</u>					
Obligations C/F	0	348,810	348,810		
Current Year Obligations	0	0	0		
Current Year Rescissions		0	0		
Current Year Payouts	0	0	0		
Balance of Current Year Admin	0	0	0		
Net Obligations YTD	0	348,810	348,810		
Balance Available	0	1,123,476	1,123,476		

ATTACHMENT B

ACTION

REPORT
IOWA ENERGY CENTER BOARD
FEBRUARY 2023

From: Energy Office

Subject: Iowa Energy Center Grant Program Policies and Procedures

Background: The Iowa Energy Center (IEC) Grant Program Policies and Procedures Handbook provides guidelines for the administration of the IEC Grant Program. As established by 261 *Iowa Administrative Code* 404.2, the Board must review the Grant Program Policies and Procedures Handbook annually.

The IEC Grant Committee members met in January to discuss potential changes to the Policies and Procedures Handbook for the fifth round of grant applications. Changes for the next round of applications include but are not limited to the following: updates to reporting requirements, clarification regarding eligible projects, and updates to the scoring matrix for both the pre-application and full application phase. These changes will strengthen the Grant Program and provide clearer guidance to applicants and grant recipients.

The document “IEC Grant Program Policies and Procedures Round Five Handbook” is attached.

Proposed Motion:	Approve the Changes to the Iowa Energy Center Grant Program Policies and Procedures Handbook
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Submitted By: Amber Buckingham

Attachments: IEC Grant Program Policies and Procedures Round Five Handbook

**Iowa Energy Center Policies and Procedures Handbook
Iowa Economic Development Authority
December 2022**

Fiscal Year Allocation: \$2.0 million

Award Announcement Date: August 10, 2023

Program Manager: Amber Buckingham
iecgrants@iowaeda.com
515-348-6222

The Iowa Energy Center Grant Program's administrative rules can be found in Iowa Administrative Code section 261.404. You may also request a copy of the administrative rules by sending an email to iecgrants@iowaeda.com.

Overview

The Iowa Energy Center Grant Program provides grants to eligible applicants on a competitive basis. The program is funded by an assessment on the intrastate revenues of Iowa's gas and electric utilities.

The Iowa Economic Development Authority, in consultation with the Iowa Energy Center (IEC) Board, administers the IEC Grant Program. Administrative rules were adopted in early 2019 to the Iowa Administrative Code 261.404.

The IEC Board has a designated Grant Committee comprised of board members involved with review and recommendation of both pre-applications and applications. The IEC Board will make funding announcements at least once per fiscal year. Grants will be made by the Authority directly to Recipients, who will submit claims to the Authority on a reimbursement basis.

This guide provides the vision, policies, and administrative procedures for management of the Grant Program. This document will be reviewed and approved by the IEC Board at least once per year. *This guide does not replace administrative rules regarding the Grant Program. If a conflict between the two exists, the administrative rules will prevail.*

Purpose

The IEC Competitive Grant Program is funded by Iowa utility ratepayers. Funds will be used for projects that aid in the implementation of the key focus areas of the Iowa Energy Plan and provide a benefit to the Iowa ratepayers. For the purposes of this program, a ratepayer is defined as a customer who pays for an electric or natural gas utility service in the State of Iowa.

- Eligible projects will have one or more of the following focus areas:
 - Energy workforce development – projects should aim to assist Iowa in attracting and training professionals to meet the state's future energy needs.

- Technology-based Energy R & D – projects should aim to develop and bring to market energy technologies through collaborative state and private partnerships.
- Biomass conversion – projects should help Iowa realize the value-added attributes of biomass in the development of bioenergy, biofuels and biochemicals.
- Natural gas expansion in underserved areas – projects should support the expansion of natural gas buildout to rural communities where its absence is a limiting factor to economic development.
- Support for rural and underserved areas – projects should support rural and underserved areas and vulnerable populations through opportunities for greater access to energy efficiency expertise, training, and programs.
- Electric grid modernization – projects should assist electric grid stakeholders in establishing a vision for what the modernized grid should look like for Iowa.
- Alternative fuel vehicles – projects should support the growing Biofuels and EV markets in Iowa, including the build out of its charging and Biofuels infrastructure
- Carbon Management – projects should create carbon value through research, agricultural stewardship and energy generation

Eligible Applicants

Iowa Businesses, colleges and universities, and private nonprofit agencies and foundations are eligible to apply for IEC grant funds

- Any eligible applicant may submit an application that includes one or more Sub-recipients.
- An eligible applicant may apply individually or jointly with another eligible or other eligible applicants
- A principal investigator will be allowed to submit one application per funding announcement. An applicant who has applied as the principal investigator for a funding announcement may also be named as a co-investigator on additional applications submitted but may not be named as a principal investigator on additional applications.
- An applicant may apply jointly with ineligible applicants, but the applicant cannot act solely as a passthrough to the ineligible entity
- A business will be considered an Iowa Business if the business is incorporated in the State of Iowa or authorized to do business in the State of Iowa.
 - A business that is authorized to do business in the State of Iowa must provide a certificate of authority during the full application phase
 - Applicant organization must have a physical location within Iowa at the time of application. The majority of funds used for salaries and wages (51%) must be used for Iowa-based employees of the applicant organization.

Project Partners

- Applications with project partners are preferred by the review committee
- **If project partners are named in the pre-application or full application, a letter of support must be provided.**

Eligibility Requirements

Requirements for IEC grant awards include but are not limited to the following.

- Applicants shall demonstrate a benefit for ratepayers.

- Applicants shall demonstrate that they are eligible candidates
- Applicants shall demonstrate the capacity for grants administration.
- Applicants who have previously received IEC awards shall have demonstrated acceptable past performance, including the timely expenditure of funds.
- Applications shall demonstrate the feasibility of completing the proposed activities with the funds requested.
- Applications shall identify and describe any other sources of funding for the proposed activities

Ineligible Projects

The following projects are ineligible for funding.

- Relocation of a business
- Expansion of a business
- Funding for existing training programs
 - If the application is to continue a training program that is ending or expanding a training program to include new technologies/fields of study, it may be eligible. Prior approval by the program manager must be obtained prior to application submission
- Private asset development
 - Examples of private asset development include:
 - Installation of solar array on a building only to benefit the owners/occupants of that building
 - Installation of equipment to benefit only one community or neighborhood with no opportunity for replicability outside of the applicant organization (i.e., community solar array, or community LED light installation)
 - Research and Development used to enable the manufacturing of a product solely for the profit of the applicant which cannot be replicated or disseminated outside of the applicant entity upon project completion.
 - Pilot scale projects are preferred for private entity research and development projects
- Pipeline, transmission line, and distribution line construction
- First generation ethanol
- Cellulosic ethanol

Eligible Expenses

Only expenditures directly related to the implementation of the funded grant activity will be reimbursed. Examples of eligible expenses include, but are not limited to:

- Salaries/Wages
- Supplies and Materials
- Domestic Travel
- Tuition
- Equipment purchases, which must be approved by the board at the time the award is made.
- Vehicle purchases, which are eligible only when the purchase of the vehicle is an integral part of the funded grant activity and must be approved by the board at the time the award is made

Ineligible Expenses

Ineligible expenses include, but are not limited to:

- Purchase or rental of buildings
- Office equipment
- Furniture and fixtures
- Intangible assets
- International travel
- Insurance
- Phone expenses

Other Budgetary Requirements

Other budget requirements include the following.

- Indirect costs shall not exceed more than 20 percent of the IEC award request.
- IEC grant funds shall not be used as cost share to a federal grant award.
- Vehicle purchases or other vehicle-related expenses are not eligible if the purchase or expense supports the proposed grant activity but is not an integral part of the proposed grant activity. If a vehicle purchase is an integral part of a grant activity but a Recipient fails to obtain board approval prior to the purchase, then the vehicle purchase is ineligible.
- The final application award request cannot increase more than 5% from the award request identified in the pre-application, unless a more substantial deviation is requested by the grant committee during the pre-application review.

Cost Share

- Cost share is required to apply for Iowa Energy Grant Funds
 - Minimum cost-share 5%
 - In-kind donations can be used as cost share
 - Cost share for Iowa based business applicants must include a monetary cost share contribution if supplies/materials or equipment are included in the budget (10% of these line items)
 - Example: Applicant includes the purchase/installation of batteries in their project budget under the equipment line item, at a cost of \$20,000. The total Iowa Energy Center award request is \$200,000. The applicant would be required to provide a total of \$10,000 in cost-share (5% of \$200,000), of which, \$2,000 must be a monetary cost share contribution (10% of the \$20,000 equipment line item).
 - **If cost share requirements are not met, the pre-application will be disqualified.**
- Applicants do have the opportunity to obtain extra points if they provide or secure additional cost share.
- Unrecovered indirect costs cannot be used as cost share. However, matching indirect costs can be counted as cost share (not to exceed 20% of the total project budget).
- Cost share must be accounted for at the pre-application phase.

- If an applicant obtains additional cost share after being selected for a full application, they must receive approval from the grant committee to include the additional cost share in the budget in the final application.
- Points awarded for cost share will be based on the total grant award request. (5.1%-20.1%)

Application Process

Pre-Applications and Applications will be available and accepted through IowaGrants.

- The IEC will review applications and make funding decisions after each funding announcement.
- Applications will only be accepted during the established application period, as identified at www.iowaeda.com
- Applicants planning to apply must create an IowaGrants account.
 - If the person completing the application already has an account through IowaGrants or a State of Iowa A&A account, this same account will be utilized.
 - If the person completing the application does not have an account, the applicant will need to allow a minimum of two weeks to register and activate their account.

Pre-Application Process

- IEDA will release an open call for grants on their website and via email to stakeholders.
- Pre-application will be completed via IowaGrants.
- Once the pre-application window has closed, all pre-applications received will be reviewed by the program manager for eligibility and completeness. Internal IEDA staff will then review the pre-applications and prepare recommendations for the committee. Internal IEDA staff included in the review may include:
 - Grant Program Manager
 - Other Energy Office Program Managers
 - Team Leader
 - Legal Counsel
 - Financial Manager
- The grant committee will then review the pre-applications and select which will move forward in the application process. The grant committee will evaluate and record the collective answers on a single review sheet with a numerical score and comments. The Grant Program manager, on behalf of the grant committee, will invite selected applicants to submit a full application.
 - This invitation will be sent to the point of contact as provided in the pre-application.

Pre-Application Review Criteria

Pre-Application Screening Criteria

- Applicant is an eligible candidate.
- Funding request meets eligible project and expense requirements.
- Request is for no less than \$10,000 and no more than \$1,000,000
- Initial grant duration does not exceed three years.
- Application is complete and submitted through IowaGrants.
- Applicants must indicate if they have obtained cost share in the pre-application phase.

- Principal Investigator/Applicant is not named as Principal Investigator/Applicant on any other applications. They can, however, be named as co-investigators or Sub-recipients on additional applications.
- Signature from the applicant organization’s **legally responsible official** on the **application approval document**, which will be uploaded to IowaGrants by the applicant
- Application approval document/certification has been signed and uploaded.

Pre-application Review Sheet

Applicant must achieve a minimum score of 32 out of 40 to move on to the full application round.

Evaluation Criteria	Total Points
Does the proposal demonstrate how the project meets one of the seven key focus areas of the Iowa Energy Plan?	7
Does the proposal demonstrate how the project provides a benefit to Iowa ratepayers?	7
Does the proposal differentiate itself from previously funded Iowa Energy Center Projects?	5
Does the proposal clearly describe the project goals?	5
If the applicant has received previous IEC awards, did they demonstrate acceptable past performance?	2
Is the project supported by any relevant stakeholders?	5
Is the budget proposal complete and does it appear to appropriately support the grant activities as described?	3
Does the proposal describe a dissemination or post-grant activity plan?	3

Does the proposal demonstrate that the applicant has obtained cost share?	3
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Full Application Process

- The grant committee will invite selected applicants to submit a full application, which will be completed via IowaGrants. The program manager will communicate the application submission deadlines and other application details to selected applicants via the email address provided during the pre-application process. The program manager will be responsible for all communications to selected applicants and will serve as the point of contact for applicants.
- Once the submission deadline has closed, the program manager will review the applications for eligibility and completeness.
- Internal IEDA staff will then review the applications and prepare recommendations for the committee. Internal IEDA staff included in the review may include:
 - Grant Program Manager
 - Other Energy Office Program Managers
 - Team Leader
 - Legal Counsel
 - Financial Manager
- An outside technical review panel may be utilized for application reviews when IEDA staff and/or grant committee members feel it is necessary. This may delay the published timeline.
- IEDA staff will prepare a recommendation for the grant committee. The grant committee will then review all of the applications and make a recommendation to the full board. The committee will score the applications together and provide one scoring sheet for each application.
- The Program Manager will summarize the applications and grant committee recommendations for the Board.
- The Board will then review all applications and the recommendations from the grant committee and vote on each application.
- Applicants selected to receive grant funds will be notified in writing within 15 days of the board's decision. Applicants not selected will receive a denial letter.

Review Criteria for Full Application

Full Application Screening Criteria

Includes all of the pre-application requirements, plus:

- Indirect cost request does not exceed 20% of the total award request.
- For projects where a co-investigator or Sub-recipient is named, a minimum of 51% of grant funds must be directed to activities performed by the Recipient organization.
- Application identifies any other sources of funding for proposed activities.
- Award request cannot increase more than 5% from the **award request** identified in the pre-application, unless a more substantial deviation is requested by the grant committee.

- Applicants must account for all cost share in the pre-application phase unless permission is granted by the Grant Committee.
- Certificate of Authority has been provided if necessary.
- **If subrecipients or project partners are named in the application, a letter of support or commitment must be provided.**

Full Application Scoring Sheet

Applicants must achieve a minimum score of 160 out of 183 to be considered for funding.

Criteria	Evaluation Criteria	Total Points
Focus Area and Ratepayer Benefit	Does the proposal explain the benefit it will provide to Iowa ratepayers?	5
	Does the benefit appear to be sound and reasonable?	15
	Does the proposal meet at least one of the seven key focus areas? Key Focus Areas. Technology-based Energy Research and Development Natural Gas Expansion in Underserved Areas Support for Rural and Underserved Areas Energy Workforce Development Biomass Conversion Electric Grid Modernization Alternative Fuel Vehicles	5
	Does the fulfilment of the key focus area seem sound and reasonable?	10
Programmatic Capabilities	Does the proposal provide information regarding organizational experience, staff qualifications, and procedures and controls for ensuring that awarded grant funds will be used in a timely and efficient manner in order to successfully complete proposed activities?	5

Iowa Energy Center Grant Program Policies and Procedures – December 2022

	<p>Has the applicant received previous Iowa Energy Center awards?</p> <p>If no, applicant will receive 5pts.</p> <p>If yes, did applicant expend grant funds in a timely manner and comply with reporting requirements? If yes, applicant will receive up to 5 pts based on past performance</p>	5
Project Approach, Outcomes and Deliverables	Does the proposal describe the applicant's project goals to be reached by project end?	5
	Are the project goals described in clear, easy to understand language?	10
	Do the project goals appear reasonable?	10
	Does the proposal describe the timeline, project tasks and milestones of the project (in chronological order)?	5
	Do the project tasks appear reasonable? Are there an appropriate number of tasks relative to the length and cost of the project?	10
	Does the proposal define the qualitative and/or quantitative measures the applicant will use to document the achievement of the goals of the project? Do the measures appear to be reasonable?	8
	Does the proposal satisfy a need or a problem?	10
	Does the proposal demonstrate a new or novel approach to a need or a problem?	5

	Does the proposal differentiate itself from previously funded Iowa Energy Center Projects?	7
	Does the proposal define the staff roles and responsibilities in the scope of work?	3
Budget and Budget Narrative	Does the proposal demonstrate that the project is feasible within the resources requested?	10
	Is the budget narrative complete, reasonable, and sound?	10
Dissemination and Replication	Does the proposal provide a clear dissemination or post-grant plan that is relevant to the goals of the project? Is the dissemination plan appropriate for the post-grant period?	5
	Does proposal demonstrate that the benefits of the project can be replicated by outside entities post grant completion?	10
Cost Share	Does the proposal indicate that the project has received either cost share funding match or external funding? This score will be calculated based on the total project budget 5.1% - 10% - 2 pts 10.1 - 15% - 5 pts 15.1 - 20% - 10 pts 20.1% + - 15pts	15
	Does the proposal indicate that the project has received external cost share from a project partner?	5
Collaboration	Does the proposal demonstrate that it is supported by any relevant stakeholders?	10

Administration

Agreement

The Authority will notify successful applicants in writing of an approved request for funding. IEDA will, at the same time, issue an agreement, which will be between the Recipient and the Authority. The Recipient must return the agreement to the Authority within 45 days of the transmittal of the

agreement from the Authority. Failure to return the agreement may be cause for the Board to terminate the award.

Amendments

Any substantive change to a funded IEC project, including time extensions, budget revisions, and alterations to proposed activities, will be considered an agreement amendment. The Recipient shall request an amendment in writing. No amendment will be valid until approved by the board, except the following (with written confirmation from the Authority).

- Staff may approve one no-cost extension provided that the extension does not cause the duration of the grant to exceed five years. Additional no-cost extensions will require board approval.
 - A typical no-cost extension will not exceed one year.
 - **The first no cost extension request must be submitted for one year.**
 - A no-cost extension request must be submitted at least 45 days prior to project end date as listed in the agreement or amendments.
- Staff may approve budget modifications that are not substantial. For purposes of this program, “substantial modification” means a budget modification of either \$10,000 or 10 percent of the total grant award, whichever is less.
 - The creation of a new budget line item will be considered a substantial modification, regardless of the amount of the modification.

To request a contract amendment (including all rebudget requests and revisions), the Recipient shall initiate the amendment process in writing, through the correspondence section of IowaGrants. If the Recipient organization has a sponsored programs office, the amendment request must be approved by the appropriate legally responsible official. Once the amendment request is received, staff will review and determine if the request requires Board approval. If it does, staff will place the amendment request on the agenda for the next scheduled Board meeting. If staff determines the request can be approved without Board approval, staff shall initiate the amendment approval process.

Disbursement of Funds/Claims

- Disbursements will be made on a reimbursement basis. No advance disbursements will be allowed. Disbursement claims must be for an amount equal to or greater than \$500 per request, except for the final draw of funds. All claims must be made through lowagrants.gov and **must be submitted quarterly**. If no funds will be requested, the recipient will still file a monthly report. When submitting a claim, the following items will be required:
 - An invoice on the submitting organization’s letterhead as well as:
 - A detailed description of the expenditures and their corresponding amounts
 - Product invoices and proof of payment for any equipment
 - Invoices and receipts for any supplies or materials purchased over \$500
 - Receipts for any domestic travel expenses over \$50.
 - Invoices and proof of payment for any subcontractor payments
 - Invoices and proof of payment for any co-investigator payments
 - The Authority may request additional documentation as needed.
 - A General Account Expenditures (GAX) Form with a Vendor Code
 - A status report for the claim period. Status reports must be received once a month. If no funds are requested, Recipients should still file a status report via IowaGrants.

- Final claim must be received within 120 days of project completion as defined in the project agreement.
 - The Authority will withhold 5% of award funds until the final report is received and approved by the program manager.
- Any funds not claimed within 120 days of project completion will be considered deobligated.
- **If claims are not submitted quarterly, the project will be considered out of compliance.**

Status Report Requirements

Recipient Reports

Monthly Status Reports

- In the final application, the applicant shall provide a timeline and the goals and objectives by which to measure the success of the project. The timeline should provide the start date (by month) and end date (by month) of each goal/objective. The Recipients’ success will be measured based on the progress towards the completion of each goal or objective as outlined in the final application timeline.
- By the 15th day of each month, the Recipient must provide an update on the percentage towards completion of each goal or objective and a narrative of the activities that have taken place in support of the goal or objective. This should be in table format and include information for each individual goal or objective, as well as a narrative for each goal or objective.

Reporting Table Format:

Project Task	Deliverable	Verification Model	Target Completion Date	Percentage Complete	Brief Narrative Describing Monthly Grant Activities

- Recipients shall also provide a narrative description of any deviations from the proposed timeline, tasks, and objectives during the reporting period. If the reported deviations will have an impact on the remainder of the project or the dissemination plan, the Recipient also notify the program manager via email.
- **If the monthly report has not been received by the last day of the month, the grant will be considered out of compliance.**

Final Report

- The final report will be submitted via IowaGrants within 120 days of the project completion date

- The Authority will withhold 5% of award funds until the final report is received and approved by the program manager.
- The final report shall contain the following information:
 - Executive summary
 - Timeline of the completion of each goal or objective
 - Narrative description of grant activities undertaken to support the project.
 - Narrative description of the achievements of the project
 - The benefit the end product provides or will provide to Iowa ratepayers
 - Budget narrative, detailing how funds were spent in support of the project
 - Narrative description of any deviation from the original budget, timeline, or any grant activities
 - Dissemination plan/post grant activities timeline. Please include any deviations to originally proposed dissemination plan.
 - Examples may include, but are not limited to:
 - Conference presentations
 - Speaking engagements
 - Publishing white papers

Staff Reports

Annual Reports

- Annual reports will be comprised of the prior 12 months of monthly status reports. Recipients will not need to submit additional reports unless documented in the tasks/objectives section of their application.

Monitoring

IEDA will use the following process to monitor the IEC grant activities:

Desktop monitoring

- IEDA will review the claims and status reports in IowaGrants.
- IEDA will review the progress of the project through monthly status reports uploaded to IowaGrants by the Recipient.
- IEDA will review timely expenditure of funds by the Recipient through monthly claims via IowaGrants
- IEDA will identify performance and expenditure issues and will contact the Recipient to address any concerns over either.
- If the program manager feels that milestones are not being met, the program manager will contact the Recipient and attempt to obtain a written explanation
- IEDA will notify the grant committee and/or IEC board of any ongoing performance and/or reporting issues.

Formal Monitoring

- IEDA staff will routinely complete one formal monitoring visit per year. Staff retains the right to increase the number of site visits if necessary.
- The IEDA project manager will notify the Recipient at least three days in advance of a site visit.
- IEDA staff will complete monitoring visit information in IowaGrants.

- If any additional information is requested during the site visit, the Recipient will upload that information into IowaGrants

Closeout Procedures

- Final report will be submitted by grant Recipient within 120 days of project completion via IowaGrants.
- Final payment will be made after the program manager has determined milestones have been met and project goals have been completed
- IEDA will provide a final closeout document stating that contracted funds have been spent in accordance with the agreement and the agreed upon deliverables have been achieved.
- If a balance remains after the final claim has been received and payment has been made, the unused funds shall be deobligated.

Noncompliance

At any time during the project, the IEC may, for cause, find that a Recipient is not in compliance with the requirements of the program. At the board's discretion, remedies may include penalties up to and including the return of grant funds to the IEC. Noncompliance may include, but are not limited to the following.

- Use of IEC funds for activities not described in the application.
- Failure to complete approved activities in a timely manner.
- Failure to comply with any applicable state or federal rules, regulations, or laws.
- Lack of a continuing capacity of the Recipient to carry out the approved project in a timely manner.

ATTACHMENT C

ACTION

REPORT
IOWA ENERGY CENTER BOARD
FEBRUARY 2023

From: Iowa Energy Center

Subject: Second No Cost Extension for 20-IEC-007

Background: The Iowa Economic Development Authority received a request from Iowa State University to extend the agreement end date for project 20-IEC-007 to May 31, 2023.

The above referenced agreement was made to Iowa State University with an agreement end date of March 31, 2022. An initial no cost extension was requested by Iowa State University and approved by staff in January 2022. This extension was granted for one year, extending the agreement end date to March 31, 2023. The PI had some difficulty hiring research assistants to assist with finishing the project and completing the necessary reports. The PI was recently able to hire two research assistants and feels that the two-month extension will enable them to complete the final deliverable and final report. The overall budget for this project will not change.

Recommendation: Staff recommends approving the second no cost extension, changing the agreement end date from March 31, 2023, to May 31, 2023.

Proposed Motion: **Approve the Amendment to 20-IEC-007**

Submitted By: Amber Buckingham, Program Manager

Attachments: 20-IEC-007 No Cost Extension Request

February 10, 2023

Amber Buckingham
Iowa Economic Development Authority
Amber.Buckingham@IowaEDA.com

SUBJECT: **Award ID:** 20IEC007
 Award Title: Strategies for building soil carbon and generating carbon negative
 energy in Iowa counties
 Request for No-Cost Extension and Rebudget Request
 ISU Account: 022213 **ISU ID:** 145702
 ISU PI: Mark Mba-Wright

Dear Amber Buckingham:

The above referenced award was made to Iowa State University and has a current end date of March 31, 2023. I am in receipt of a letter from the Principal Investigator, Dr. Mark Mba-Wright, requesting a no-cost extension to May 31, 2023, to complete the work being undertaken on this project.

The extension would allow the students working on the project to complete the report and required work in alignment with their appointment. The current balance of the award is \$136k. The funds will support the completion of the final project task and report.

Two research assistants have been hired this semester to start work on the project. We plan to use the research assistants in the following manner:

- Final report and business plan: we have hired one graduate student to complete the business plan and help with the final report.
- Anaerobic digestion with biochar experiments: we have hired one graduate student to conduct final anaerobic digestion experiments. After our initial experiments, we identified some interesting results related to the microbial community in the digester. Biochar anaerobic digestion did increase methane production, but it appears to also increase ammonia production. Ammonia can be detrimental because it could cause odors, but depending on the quantity, it could also be a valuable resource to gather. These final tests will provide more information about how to prevent, or enhance, the production of ammonia when using biochar. This will require rebudgeting of \$1,800 for lab fees not in the original budget to conduct the final tests.

With the two research assistants starting in in the past month, anticipated expenses for Jan-March will be:

PI Salary	\$13,777
PI Benefits	\$ 3,651
Stipend	\$13,266
Benefits	\$ 1,420
Tuition	\$10,150
Supplies	\$ 2,000
Lab Service Fees	\$ 1,800
IDC (20%)	\$ 9,213
TOTAL ANTICIPATED EXPENSES	\$55,227

If the NCE to 5/31/2023 were to be granted, the total updated expenses on the project for January through May 31, 2023 are projected to be:

PI Salary	\$13,777
PI Benefits	\$ 3,651
Stipend	\$19,900
Benefits	\$ 2,129
Tuition	\$10,151
Supplies	\$ 2,000
Lab Service Fees	\$ 1,800
IDC (20%)	\$10,681
TOTAL ANTICIPATED EXPENSES	\$64,089

Iowa State University has carefully reviewed the request and concurs therein. **We request the termination date be changed from 03/31/2023 to 05/31/2023.** We also ask for approval to rebudget \$1,800 from Supplies to Lab Fees to run anaerobic digestion tests such as vials, corn stover and biochar samples, and gas microbe sampling.

All other terms and conditions remain unchanged. If I may provide you with additional information or be of further assistance, please do not hesitate to contact our office.

Sincerely,



Kim Robson
Award Administrator

cc: Dr. Mark Mba-Wright
Mary Scott-Hall
Kristin Doerder
Jeremy Nepl

ATTACHMENT D

ACTION

REPORT
IOWA ENERGY CENTER BOARD
FEBRUARY 2023

From: Iowa Energy Center

Subject: Budget Modification for 20-IEC-017

Background: Iowa State University has requested a budget modification amendment for award 20-IEC-017 - *Low-Cost Biobased Composite Material for Ultra Durable and Recyclable Wind Turbine Blades*.

The PI has indicated the need to reallocate funds within the approved budget to support costs relevant to the proposed research activities, such as supporting a part-time post doc, supply costs and tuition. They have requested to move the funds from Other Direct Costs, Student Tuition, and Supplies and Materials to Honoraria and Services. These changes do not impact the overall grant award request, which remains unchanged at \$450,436.

Administrative Rule 261 *IAC* 404.7(7)(a) provides that any substantive change to a funded IEC project, including time extensions, budget revisions, and alterations to proposed activities, will be considered an agreement amendment. As this request is over \$10,000, Board approval is necessary.

Recommendation: Staff recommends approving the amendment to 20-IEC-017; moving the requested funds from Other Direct Costs, Student Tuition and Supplies and Materials to Honoraria and Services.

Proposed Motion: **Approve the Amendment to 20-IEC-017**

Submitted By: Amber Buckingham, Program Manager

Attachments: Rebudget Request from Iowa State University

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Office of Sponsored
Programs Administration
1138 Pearson Hall
505 Morrill Road
Ames, Iowa 50011-2103
Phone: 515 294-5225
Fax: 515 294-8000

December 13, 2022

Amber Buckingham
Iowa Economic Development Authority
Amber.Buckingham@IowaEDA.com

SUBJECT: **Award ID:** 20IEC017
 Award Title: Low-cost biobased composite material for ultra-durable and
 recyclable wind turbine blades
 Request for No-Cost Extension
 ISU Account: 023418 **ISU ID:** 148569
 ISU PI: Dr. Xianglan Bai

Dear Amber Buckingham:

The above referenced award was made to Iowa State University and has a current end date of September 25, 2023. I am in receipt of a letter from the Principal Investigator, Dr. Xianglan Bai, requesting a no-cost extension to September 25, 2024, and a re-budget of obligated funds to complete the work being undertaken on this project.

This re-budget and no-cost extension are being requested based on the meeting between our Sponsored Programs Accounting Office, Dr. Bai, and Amber Buckingham. It was suggested that a re-budget and a no-cost extension be requested at the same time.

This extension would allow the PI to complete the proposed research tasks. The re-budget will support the costs relevant to the proposed research activities (e.g., supporting students/and or a partial time postdoc, supply costs and tuition).

Iowa State University has carefully reviewed the request and concurs therein. **We request the termination date be changed from 09/25/2023 to 09/25/2024 and the budget be revised as attached below.** All other terms and conditions remain unchanged. If I may provide you with additional information or be of further assistance, please do not hesitate to contact our office.

Sincerely,



Kim Robson
Award Administrator

cc: Xianglan Bai
 Mary Scott-Hall
 Kristin Doerder
 Jeremy Nepl

Award	Original Budget		Proposed Re-budget		Revised Budget Requested
Award					
AWD-023418-00001					
GR-023418-00001	\$450,436.00		\$0.00		\$450,436.00
ISU Object Class Set. Honoraria/Services	\$0.00		\$50,000.00		\$50,000.00
ISU Object Class Set. Indirect Cost 25% on all spending	\$90,087 00		\$0 00		\$90,087 00
ISU Object Class Set: Other Direct Costs	\$26,000 00		-\$22,918 46		\$3,081 54
ISU Object Class Set. Payroll Benefits	\$33,909.00		\$0.00		\$33,909 00
ISU Object Class Set. Printing/Copying	\$0 00		\$0 00		\$0.00
ISU Object Class Set. Salaries/Wages	\$177,919 00		\$0 00		\$177,919 00
ISU Object Class Set. Student Tuition	\$52,521.00		-\$7,000.00		\$45,521.00
ISU Object Class Set. Supplies/Materials	\$58,000 00		-\$20,081 54		\$37,918.46
ISU Object Class Set. Travel - Domestic	\$12,000 00		\$0.00		\$12,000.00

ATTACHMENT E

ACTION

REPORT
IOWA ENERGY CENTER BOARD
FEBRUARY 2023

From: Iowa Energy Office
Subject: 21-IEC-009 Grant Modification

Background: Iowa State University (ISU) has requested a grant modification amendment for award 21-IEC-009 - *Micro-DERMS: DER Management System for Real-Time Monitoring and Control of Networked Mobile-Microgrids and DER-integrated Distribution Grids*

Due to an administrative issue, the originally named Principal Investigator (PI), Dr. Gelli, was unable to continue his role in the project research and Iowa State University requested that Dr. Anne Kimber, the former Co-PI, be named lead PI in a previous amendment request. The aforementioned administrative issue has now been resolved and Dr. Gelli can return to the role of Principal Investigator. ISU would like to transition the PI role to Dr. Gelli effective immediately. Dr. Kimber will resume her role as Co-PI on the project. The end date for the project is October 4, 2024.

Administrative Rule 261 IAC 404.7(7)(a) provides that any substantive change to a funded IEC project, including time extensions, budget revisions, and alterations to proposed activities, will be considered an agreement amendment. Staff considers this amendment to be substantive and requires Board approval.

Staff Recommendation: Approve the change of PI for 21-IEC-009, which will be effective as of February 23, 2023.

Proposed Motion:	Approve the grant modification request for 21-IEC-009
-------------------------	--

Submitted By: Amber Buckingham

Attachments: 21-IEC-009 Grant Modification Request.

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Office of Sponsored
Programs Administration
1138 Pearson Hall
505 Morrill Road
Ames, Iowa 50011-2103
Phone: 515 294-5225
Fax: 515 294-8000

February 14, 2023

Amber Buckingham
Amber.Buckingham@IowaEDA.com

SUBJECT: PI Change Request

Award Title: "Micro-DERMS: DER Management System for Real-Time Monitoring and Control of Networked Mobile-Microgrids and DER-integrated Distribution Grids"

Award ID: 21IEC009

ISU Account: 024878

ISU ID: 151696

ISU PI: Dr. Anne Kimber

Dear Amber Buckingham:

The above referenced grant was made to Iowa State University in the amount of \$300,000 under the direction of Dr. Ravikumar Gelli. Per amendment 1 the PI was changed from Dr. Gelli to Dr. Anne Kimber due to VISA issues that rendered Dr. Gelli stranded abroad and unable to perform the responsibilities as the PI. I am in receipt of a request from Dr. Anne Kimber to change the PI for this project in the following manner and reinstate Dr. Gelli:

Dr. Anne Kimber as the interim PI will no longer be the lead PI and will resume her role as a Co-Investigator on this project. It is also our request that Dr. Ravikumar Gelli be reinstated as the lead Principal Investigator on the project.

We at Iowa State University have reviewed Dr. Kimber's request and concur therein. If I can provide you with additional information or be of further assistance, please do not hesitate to contact me.

Sincerely,
Jeff



February 14, 2023

Jeff Klein
Senior Award Administrator
Office of Sponsored Programs Administration

cc: Ravikumar Gelli
Anne Kimber

ATTACHMENT F

ACTION

REPORT
IOWA ENERGY CENTER BOARD
FEBRUARY 2023

From: Iowa Energy Center

Subject: Ryan Wangsness – Request for Termination

Agreement Number: 20-AEL-009

Project Type: 36 kW solar project

Award Date: May 21, 2021

Loan Amount: \$38,887.50

Loan Term: 60 months

Agreement Executed Date: August 3, 2021

Ryan Wangsness requests to terminate the loan agreement with IEDA and the Iowa Energy Center. His project was delayed, and he ultimately wanted to utilize other financing. Collateral has not been provided and funds have not been disbursed.

Proposed Motion: Approve IEDA Execution of a Termination Agreement with Ryan Wangsness

Submitted By: Stephanie Weisenbach

Attachments: Email from Ryan Wangsness

ATTACHMENT

Re: update on loan 20-AEL-009



Ryan Wangsness <ryanwangsness@yahoo.com>
To: Stephanie Weisenbach

[↩ Reply](#) [↩ Reply All](#) [→ Forward](#) [📎](#) [⋮](#)

Thu 12/15/2022 12:34 AM

ⓘ This is the most recent version, but you made changes to another copy. [Click here to see the other versions.](#)
Follow up. Start by Wednesday, December 28, 2022. Due by Wednesday, December 28, 2022.
You replied to this message on 12/28/2022 2:16 PM.

Stephanie,

Thanks for getting back to me. I gave it a lot of thought and have decided I will go with a loan that has a longer amortization . As much as I don't like paying for interest I think it will work better for my taxes and cash flow to do the loan that way. You can give the loan to someone that is a better fit for it. Sorry for the delay.

Thanks,

Ryan Wangsness

[Sent from Yahoo Mail for iPhone](#)

On Wednesday, December 14, 2022, 2:24 PM, Stephanie Weisenbach <Stephanie.Weisenbach@iowaEDA.com> wrote:

Hi Ryan,

Do you have an update on whether you're planning to utilize this loan?

STEPHANIE WEISENBACH | Program Manager
IOWA ECONOMIC DEVELOPMENT AUTHORITY
1963 Bell Avenue, Suite 200 | Des Moines, Iowa 50315
+1 (515) 348-6221 | stephanie.weisenbach@iowaeda.com



Applicant: City of Hawarden
Loan Request: \$2,500,000 for a 9-year term
Recommendation: Approve
Board Decision: February 23, 2023

ATTACHMENT G

Summary

The city of Hawarden, a municipal electric and gas utility, plans to complete a new 69-12.47 kV electrical substation. This will replace their current substation that has reached the end of its useful life and doesn't have the capacity to serve the planned growth of the community. The new substation will improve reliability, serve the increasing load in the community, and include SCADA (supervisory control and data acquisition) to be able to monitor and control the system. The total project cost is estimated \$5,997,600 per the engineer but it may change after the city goes out to bid. Financing through EIRLP will reduce the costs of borrowing from solely bond financing at a higher interest rate and utilizing their reserve fund to help cover project costs, which the city needs to maintain for repairs and emergencies.

The recommendation from the Loan Committee is to loan the full amount and term requested at the 2% interest rate established in the program's policies and procedures.

Funding Sources

Source	Form	Amount
Bond financing	Debt	At least \$2,950,000 committed
Sioux County Board of Supervisors	Investment	TBD but committed

Each funding source is committed yet the amounts for each are not final. Documented commitments from sources of funding needed to complete the project will be required as a condition to disbursement of EIRLP funds.

Program Purpose and Eligibility

The Energy Infrastructure Revolving Loan Program (EIRLP) requires projects to fulfill at least one of the program purposes in Iowa code. This project most aligns with purposes of the electric distribution and electric grid modernization.

The program also requires projects to fulfill at least one of three evaluation criteria. The project fulfills the criteria below, which is required for loans over \$1 million.

- **Broad-reaching benefits to the state, local community and/or utility ratepayers.** Project will improve resiliency and expand capacity through a larger substation. The city's ability to convey the reliability of utilities is an economic development tool and additional load in the community is planned due to the expansion and location of new facilities. This includes an \$11.2 million expansion of the Hawarden Regional Hospital which serves the region with health care services and all the area 911 calls, their grain elevator, high school, and a potential future expansion of food processor and pet food producer, Dakota Treats. This is in addition other economic development efforts to increase available space for businesses to open. The substation delivers electricity to 1,375 meters and a population of over 2,700 residents. Over half of the population is below the low-to-moderate income threshold and the loan will ease the pressure to increase rates to cover the project.

Applicant: City of Hawarden
Loan Request: \$2,500,000 for a 9-year term
Recommendation: Approve
Board Decision: February 23, 2023

Collateral

Utility revenues are the pledged security for the loan. Municipalities have limited security available for debt service based on Iowa Code. IEDA will work with the city's bond counsel to structure the loan agreement's collateral to in compliance with Iowa code.

Project Timeline

Award Decision Date: February 23, 2023
Completion: September 2024

Applicant: Red Lion Albia Schools Solar LLC
Loan Request: \$186,000 for a 15-year term
Recommendation: Approve
Board Decision: February 23, 2023

ATTACHMENT H

Summary

Red Lion Albia Schools Solar LLC plans to complete and own a solar plus battery storage project and execute a Power Purchase Agreement with Albia Community School District. The project will add 174 kW of solar arrays at 7 school facilities, mostly rooftop arrays with one ground mount next to a greenhouse. It also includes a 120kW/240kWh battery system at the high school to offset demand charges. The total project cost is \$1,136,000. The electric utility for this project area is Chariton Valley Electric Cooperative.

Funding Sources

Other Financing

Source	Form	Estimate
Investors	Private equity	\$950,000*

*Amount subject to adjustment based on potential grant approval and reserves needed

Incentives

Name of Incentive	Source	Estimate
Federal Investment Tax Credit (ITC)	Federal	\$454,224
USDA REAP grant (not secured)	Federal	\$192,149
Total		\$646,373

Documented commitments from sources of funding needed to complete the project will be required as a condition to disbursement of EIRLP funds.

Program Purpose and Eligibility

The Energy Infrastructure Revolving Loan Program (EIRLP) requires projects to fulfill at least one of the program purposes. This project most closely aligns with the electric generation purpose. The program also requires projects to fulfill at least one of three evaluation criteria.

- **Broad-reaching benefits to the state, local community and/or utility ratepayers.** The project is helping the public school district reduce its costs as well as provide teaching opportunities in STEM curriculum. The projected savings to the school district is \$3,000 initially and over \$350,000 over the next 30 years.
- **Creative or innovative approach to a need or problem.** The project integrates a battery storage system programmed to reduce demand spikes and associated charges. Battery storage is in early stages of adoption in Iowa, and this may be the first battery storage system within a K-12 school district.

Applicant: Red Lion Albia Schools Solar LLC
Loan Request: \$186,000 for a 15-year term
Recommendation: Approve
Board Decision: February 23, 2023

Collateral

Three types of collateral are pledged to secure the loan.

- 1) Power Purchase Agreement (PPA) assignment with associated revenues
- 2) UCC on solar and battery equipment
- 3) Corporate guaranty from Red Lion Renewables LLC (owner company of project LLC)

Project Timeline

Award Decision Date: February 23, 2023
Installation: Estimated by September 2024

Applicant: Red Lion Dallas Center Solar LLC
Loan Request: \$323,000 for a 15-year term
Recommendation: Approve
Board Decision: February 23, 2023

ATTACHMENT I

Summary

Red Lion Dallas Center Solar LLC plans to complete and own a solar project and execute a Power Purchase Agreement with the city of Dallas Center. The project will add 418 kW of solar arrays at 10 city-owned facilities, including an integrated solar canopy along the Raccoon River Valley Bike Trail and part of a planned amphitheater. The total project cost is \$1,546,000. The electric utility for this project area is MidAmerican Energy.

Funding Sources

Other Financing

Source	Form	Estimate
Investors	Private equity	\$1,223,000*

*Amount subject to adjustment based on potential grant approval and reserves needed

Incentives

Name of Incentive	Source	Estimate
Federal Investment Tax Credit (ITC)	Federal	\$618,182
USDA REAP grant (not secured)	Federal	\$203,015
Total		\$812,197

Documented commitments from sources of funding needed to complete the project will be required as a condition to disbursement of EIRLP funds.

Program Purpose and Eligibility

The Energy Infrastructure Revolving Loan Program (EIRLP) requires projects to fulfill at least one of the program purposes. This project most closely aligns with the electric generation purpose. The program also requires projects to fulfill at least one of three evaluation criteria. The project fulfills these two criteria:

- **Broad-reaching benefits to the state, local community and/or utility ratepayers.** Overall, the project is expected to save the city \$10,000/year initially and approximately \$815,000 over 30 years.
- **Creative or innovative approach to a need or problem.** The solar canopy is unique in its design and its location along the well-traveled Raccoon Valley Bike Trail which attracts 30,000 cyclists that travel the trail annually. Visitors and residents will also see and benefit from the project during concerts and events at the planned amphitheater.

Applicant: Red Lion Dallas Center Solar LLC
Loan Request: \$323,000 for a 15-year term
Recommendation: Approve
Board Decision: February 23, 2023

Collateral

Three types of collateral are pledged to secure the loan.

- 1) Power Purchase Agreement (PPA) assignment with associated revenues
- 2) UCC on solar and battery equipment
- 3) Corporate guaranty from Red Lion Renewables LLC (owner company of project LLC)

Project Timeline

Award Decision Date: February 23, 2023
Installation: Estimated by December 2023

Applicant: Red Lion Wapello Schools Solar LLC
Loan Request: \$584,000 for a 15-year term
Recommendation: Approve
Board Decision: February 23, 2023

ATTACHMENT J

Summary

Red Lion Wapello Schools Solar LLC plans to complete and own a solar project and execute a Power Purchase Agreement with the Wapello Community School District. The project will add 678 kW of solar arrays on rooftops of three facilities and a solar canopy carport covering the elementary school drop off zone. The total project cost is \$2,206,000. The electric utility for this project area is Alliant Energy.

Funding Sources

Other Financing

Source	Form	Estimate
Investors	Private equity	\$1,622,000*

*Amount subject to adjustment based on potential grant approval and reserves needed

Incentives

Name of Incentive	Source	Estimate
Federal Investment Tax Credit (ITC)	Federal	\$882,041
USDA REAP grant (not secured)	Federal	\$372,424
Total		\$1,254,465

Documented commitments from sources of funding needed to complete the project will be required as a condition to disbursement of EIRLP funds.

Program Purpose and Eligibility

The Energy Infrastructure Revolving Loan Program (EIRLP) requires projects to fulfill at least one of the program purposes. This project most closely aligns with the electric generation purpose. The program also requires projects to fulfill at least one of three evaluation criteria. The project fulfills the first criteria:

- **Broad-reaching benefits to the state, local community and/or utility ratepayers.** The project was originally initiated by two teams of students participating in their Lego League, a STEM project competition focused on real-world problem-solving experiences. Overall, the project is expected to result in a savings of \$16,500/year initially and over \$1,467,000 over 30 years. Benefits will impact the school district, its students and community it serves.

Applicant: Red Lion Wapello Schools Solar LLC
Loan Request: \$584,000 for a 15-year term
Recommendation: Approve
Board Decision: February 23, 2023

Collateral

Three types of collateral are pledged to secure the loan.

- 1) Power Purchase Agreement (PPA) assignment with associated revenues
- 2) UCC on solar and battery equipment
- 3) Corporate guaranty from Red Lion Renewables LLC (owner company of project LLC)

Project Timeline

Award Decision Date: February 23, 2023
Installation: Estimated by September 2023

Applicant: Red Lion Creston Schools Solar LLC
Loan Request: \$1,381,000 for a 15-year term
Recommendation: Deny
Board Decision: February 23, 2023

ATTACHMENT K

Summary

Red Lion Creston Schools Solar LLC plans to complete and own a solar plus battery storage project and execute a Power Purchase Agreement with the Creston Community School District. The project will add 1771 kW of solar through three co-located solar arrays powering three facilities. It also includes a 120kW/240kWh battery system to offset demand charges. The total project cost is \$5,798,000. The electric utility for this project area is Alliant Energy.

The Loan Committee recommends denying this application due to recommending approval of other applications with common ownership.

Funding Sources

Other Financing

Source	Form	Estimate
Investors	Private equity	\$4,417,000*

*Amount subject to adjustment based on potential grant approval and reserves needed

Incentives

Name of Incentive	Source	Estimate
Federal Investment Tax Credit (ITC)	Federal	\$2,319,142
USDA REAP grant (not secured)	Federal	\$500,000
Total		\$2,819,142

Documented commitments from sources of funding needed to complete the project will be required as a condition to disbursement of EIRLP funds.

Program Purpose and Eligibility

The Energy Infrastructure Revolving Loan Program (EIRLP) requires projects to fulfill at least one of the program purposes. This project most closely aligns with the electric generation and innovative technologies purpose. The program also requires projects to fulfill at least one of three evaluation criteria. The project addresses these two criteria:

- **Broad-reaching benefits to the state, local community and/or utility ratepayers.** The project is expected to save the school district \$46,700/year initially and approximately \$3,700,000 over 30 years. Benefits will impact the school district, its students and community it serves.
- **Creative or innovative approach to a need or problem.** The project integrates a battery storage system programmed to reduce demand spikes and associated charges. Battery storage is in early stages of adoption in Iowa, and this may be the first battery storage system within a K-12 school district.

Applicant: Red Lion Creston Schools Solar LLC
Loan Request: \$1,381,000 for a 15-year term
Recommendation: Deny
Board Decision: February 23, 2023

Collateral

Three types of collateral are pledged to secure the loan.

- 1) Power Purchase Agreement (PPA) assignment with associated revenues
- 2) UCC on solar and battery equipment
- 3) Corporate guaranty from Red Lion Renewables LLC (owner company of project LLC)

Project Timeline

Award Decision Date: February 23, 2023
Installation: Estimated by March 2024

Applicant: Red Lion Knoxville Waterworks Solar LLC
Loan Request: \$467,000 for a 15-year term
Recommendation: Deny
Board Decision: February 23, 2023

ATTACHMENT L

Summary

Red Lion Knoxville Waterworks Solar LLC plans to complete and own a solar project and execute a Power Purchase Agreement with the City of Knoxville Waterworks. The project will add 972 kW of solar arrays. The total project cost is \$3,590,000. The electric utility for this project area is MidAmerican Energy.

The Loan Committee is recommending denial due to the common ownership of applications recommended for approval.

Funding Sources

Other Financing

Source	Form	Estimate
Investors	Private equity	\$1,155,000*

*Amount subject to adjustment based on potential grant approval and reserves needed

Incentives

Name of Incentive	Source	Estimate
Federal Investment Tax Credit (ITC)	Federal	\$1,435,713
USDA REAP grant (not secured)	Federal	\$500,000
Total		\$1,935,713

Documented commitments from sources of funding needed to complete the project would be required as a condition to disbursement of EIRLP funds.

Program Purpose and Eligibility

The Energy Infrastructure Revolving Loan Program (EIRLP) requires projects to fulfill at least one of the program purposes. This project most closely aligns with the electric generation purpose. The program also requires projects to fulfill at least one of three evaluation criteria. The project fulfills the first criteria:

- **Broad-reaching benefits to the state, local community and/or utility ratepayers.** the project is expected to result in a savings of \$10,000/year initially and over \$1,000,000 over 30 years. Overall, the project is expected to result in a savings of \$16,500/year initially and over \$1,467,000 over 30 years. Benefits would impact the water ratepayers.

Applicant: Red Lion Knoxville Waterworks Solar LLC
Loan Request: \$467,000 for a 15-year term
Recommendation: Deny
Board Decision: February 23, 2023

Collateral

Three types of collateral are pledged to secure the loan.

- 1) Power Purchase Agreement (PPA) assignment with associated revenues
- 2) UCC on solar and battery equipment
- 3) Corporate guaranty from Red Lion Renewables LLC (owner company of project LLC)

Project Timeline

Award Decision Date: February 23, 2023
Installation: Estimated by December 2023

ATTACHMENT M

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Civil & Environmental Engineering
IIHR – Hydrosience & Engineering

The Iowa Wastewater and Waste to Energy Research Program

Iowa Energy Center Meeting

Dr. Craig Just (with thanks to many others)

February 23rd, 2023

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**IIHR—Hydroscience
and Engineering**



The IWWERP concept emerged from decades of extensive field research



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Wastewater and Waste to Energy
Research Program

WASTE? WATER

FROM WASTE TO RESOURCE

Worldwide, the majority of wastewater is neither collected nor treated. Wastewater is a valuable resource, but it is often seen as a burden to be disposed of. This perception needs to change.



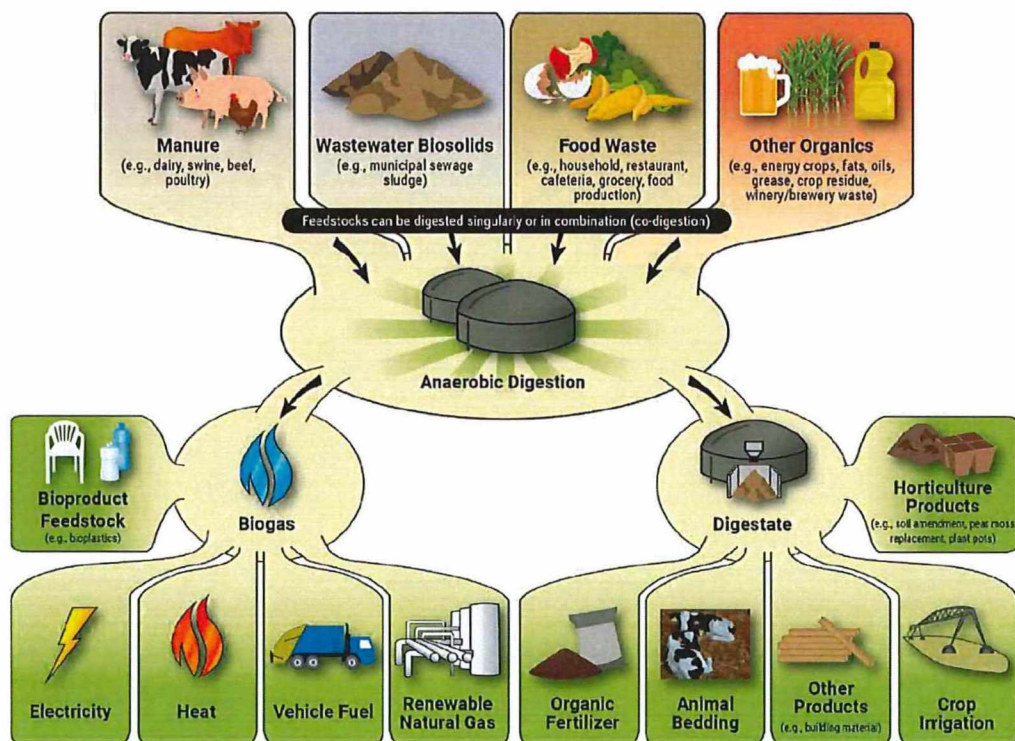
<https://blogs.worldbank.org/water/wastewater-treatment-critical-component-circular-economy>

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Research Program





Global
Methane
Hub

[About](#) [Mission & Vision](#) [Pledge](#) [Facts](#) [Our Team](#) [Partners](#)

Reducing methane gas is the **fastest way** to address climate change in the **short term**.

Methane emissions have contributed to roughly 30% of current warming, causing harm to communities around the globe. Reducing methane by 45% is crucial to reducing warming by 0.3 degrees Celsius by 2040 and putting us on a path to a healthy future.



IWWERP will:

- Engage communities and stakeholders to forge long-term partnerships
- Try new ideas in real-world, water resource recovery facility and waste-to-energy locations
- Develop and test new and improved technologies in partnership with commercial vendors
- Improve small town, controlled discharge lagoons
- Improve waste-to-energy projects with a focus on industrial and municipal partnerships
- Provide “one stop” analytical capabilities to meet the unique needs of each community and industrial partner
- Increase Iowa’s competitiveness on external infrastructure funding proposals
- Improve the quality of Iowa’s valuable water resources

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IWWERP places a high priority on stakeholder engagement



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IWWERP recently hosted staff from the Iowa Department of Natural Resources, including Director Lyon, Deputy Director Moon, and Environmental Services Division Administrator Torney.



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IWWERP and BES Water Solutions onsite in Wayland, Iowa, with Senator Jeff Reichman and Mayor Chet Fort



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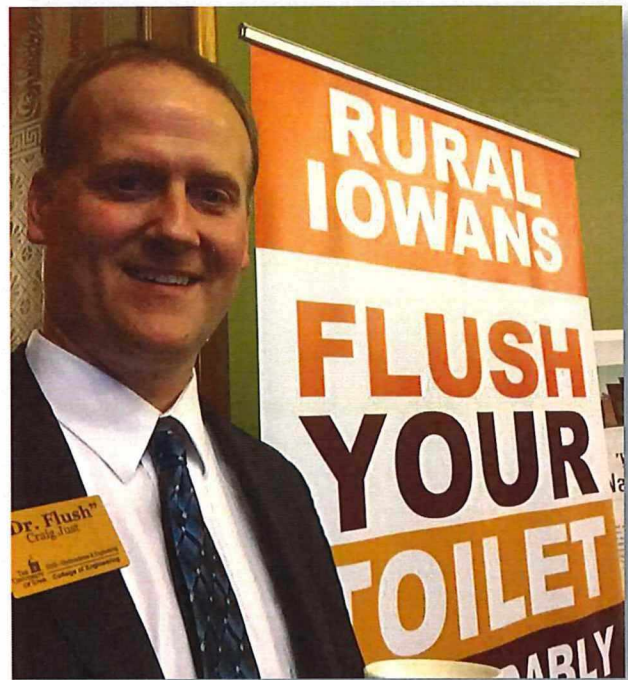
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IWWERP and BES Water Solutions engaged elected officials in Des Moines on February 9th, 2023

- Representative Collins
- Senator Dickey
- Representative Holt
- Representative Jeneary
- Senator Koelker
- Senator Kraayenbrink
- Senator Lofgren
- Senator Reichman
- Representative Shipley
- Senator Sweeney
- Senator Taylor
- Senator Wahls
- Senator Whitver
- Representative Zabner



Vintage photo from the Capitol, March 17th, 2017

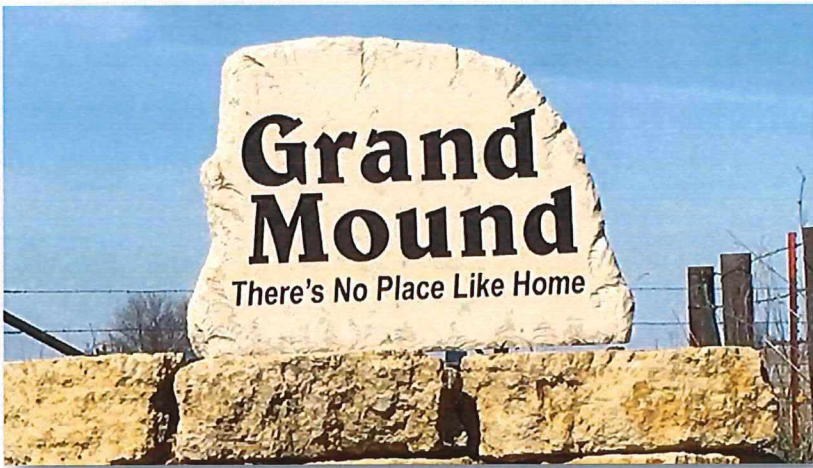
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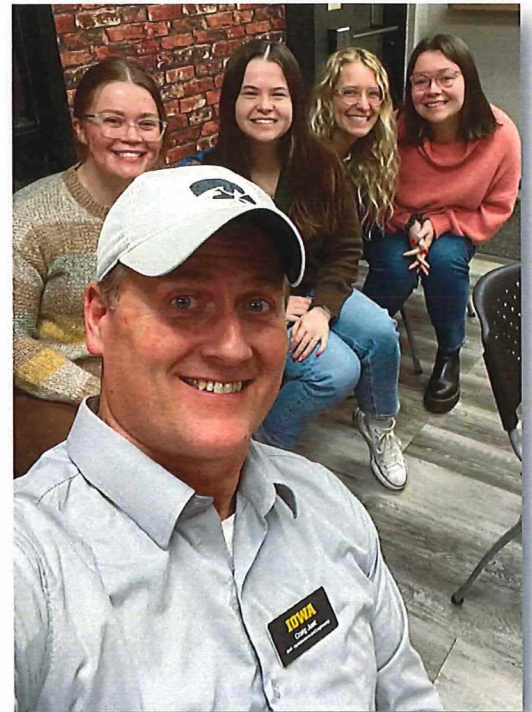
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IWWERP and Project Design and Management students at the Grand Mound, Iowa, city council meeting on February 13th, 2023



<https://gmtel.net/services/>



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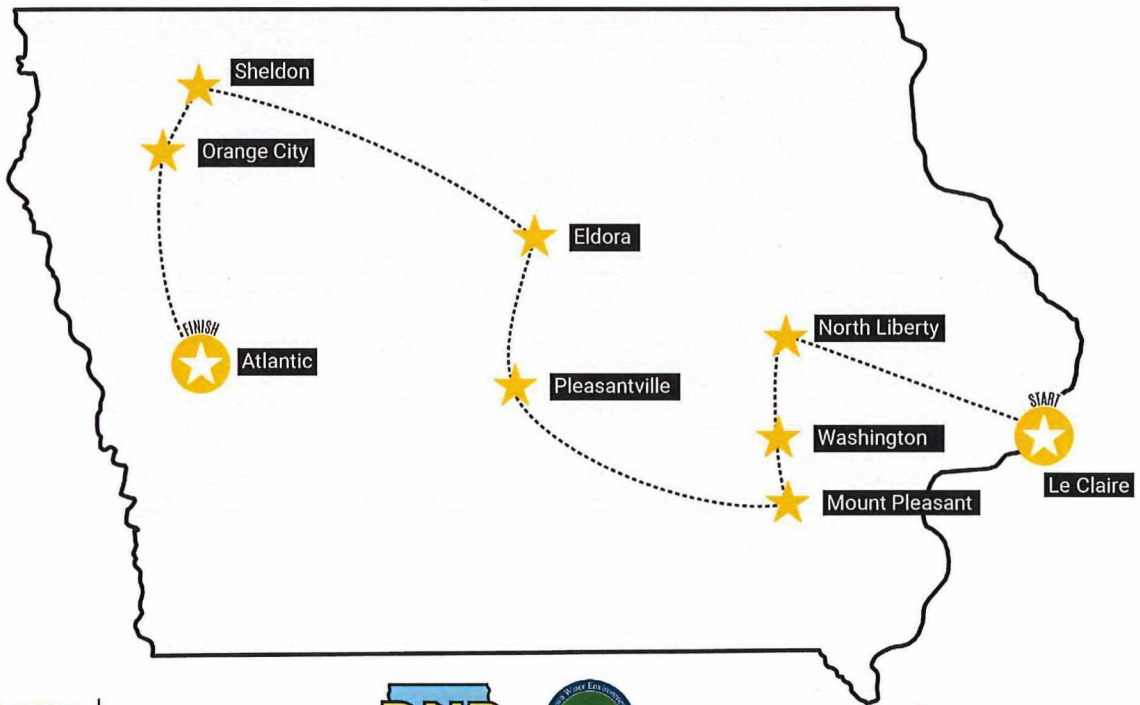
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THE 2022 GREAT WASTEWATER TREATMENT TOUR ACROSS IOWA

August 15th - 19th



IOWA | College of Engineering
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IOWA
economic development



The Wastewater Optimization Program doesn't stop at compliance, it aims for treatment excellence



College of Engineering
Wastewater and Waste to Energy
Research Program



FACT SHEET

Wastewater Optimization Program in Iowa

The wastewater treatment plant optimization program has two purposes:

- 1) To further reduce point source nutrient output to Iowa's rivers and streams
- 2) Reduce energy consumption

The initial focus of the program is on municipal wastewater treatment plants.



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Wastewater and Waste to Energy
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Over 500 lagoons in Iowa struggle with BOD, ammonia, bacteria, TSS, and/or pH discharge limits



Over 500 lagoons in Iowa struggle with BOD, ammonia, bacteria, TSS, and/or pH discharge limits



Over 500 lagoons in Iowa struggle with BOD, ammonia, bacteria, TSS, and/or pH discharge limits





The BES Water Solutions project is the first to “graduate” from the IWWERP Tech Park



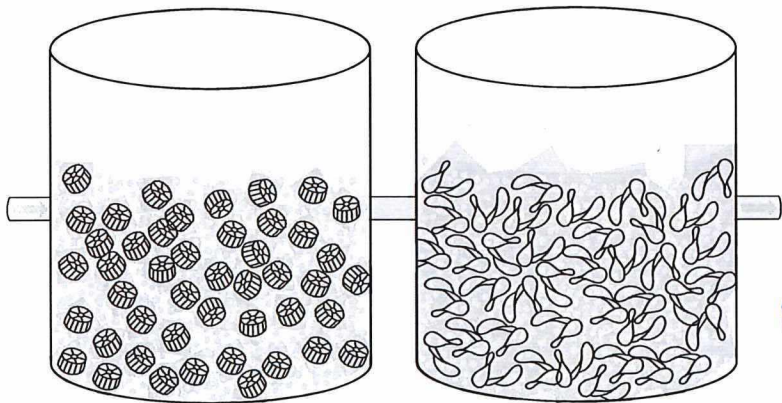
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Moving bed biofilm reactors are designed based on surface area loading rate ($\text{g}/\text{m}^2/\text{day}$). The surface area available for biofilm formation is governed by the protected surface area of the carrier type and the volume of carriers employed.



Kontakt 500
 $\sim 370 \text{ m}^2/\text{m}^3$

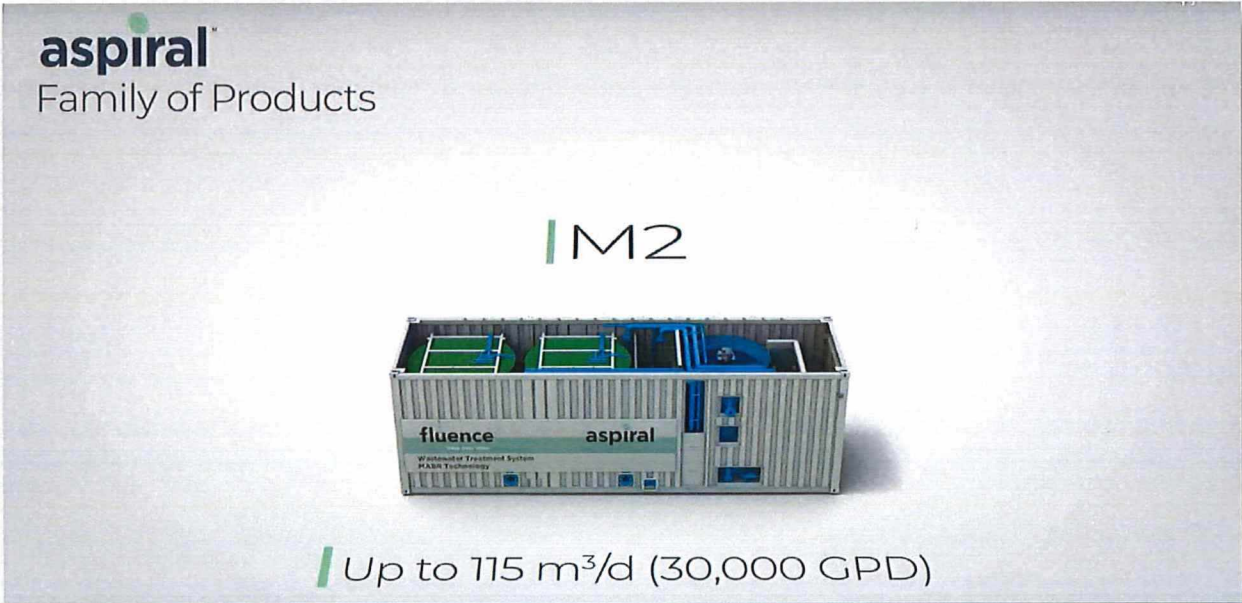


Mutag BioChip™
 $> 5500 \text{ m}^2/\text{m}^3$

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IWWERP and BES Water Solutions Celebrate a New Partnership with Fluence for Treating Controlled Discharge Lagoons



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Primary Campaign / Have a research idea? / Compliant and Affordable Wastewater Treatment for Rest Stop Lagoons (#3869)

✓ Topic Submission Discussion & Evaluation Development Project

In Open Feedback (2/7)



Compliant and Affordable Wastewater Treatment for Rest Stop Lagoons (#3869)



By Submitted anonymously 11/20/2022 - 8:34pm 46 reads

There is an opportunity to fundamentally shift the way that controlled discharge lagoons at highway rest stops and other DOT facilities are operated. A sustainable, technology-based approach to augment lagoon treatment capacity for ammonia, bacteria, and suspended solids can be demonstrated at multiple locations. Effluent discharge compliance and affordability of operations would be assessed in partnership with Iowa DNR. If successful, the approach can be expanded to additional locations in partnership with transportation agencies and Iowa-based business partners.

- Asset Management
- Highway Operations
- Environment

View comment



12 Votes

Community Voting

The IWWERP Tech Park features a greenhouse for algae-based treatment and decarbonization



Revolving algal
biofilm (RAB™)
technology

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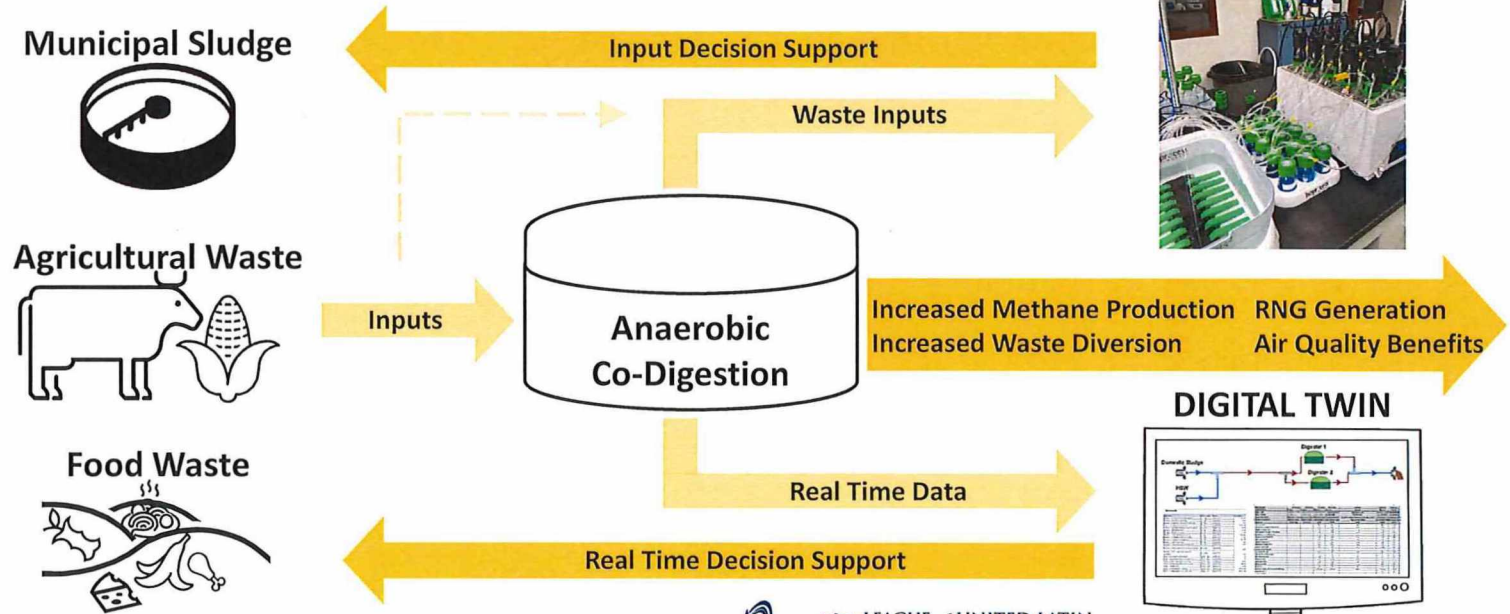
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Lab-Scale and Digital Twin Approaches to Maximize Anaerobic Co-Digestion for Community Benefit

LAB SCALE METHANE POTENTIAL TESTS



Civil & Environmental Engineering



LEAGUE of UNITED LATIN AMERICAN CITIZENS Council #307




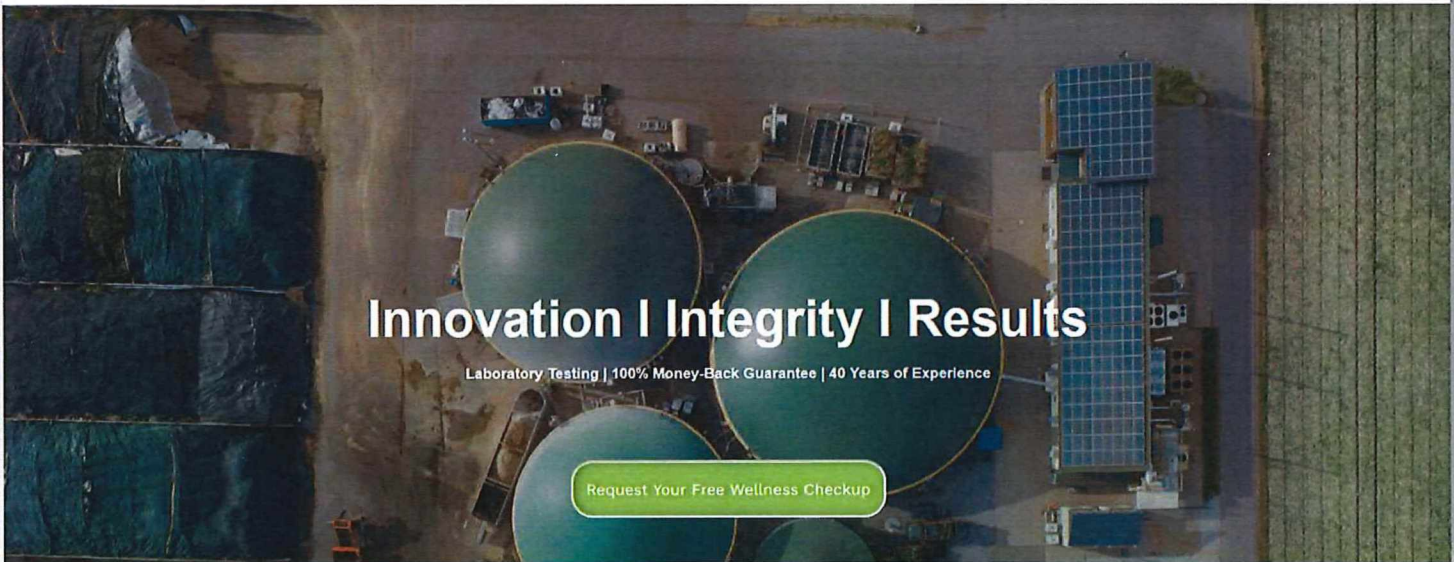
College of Engineering Wastewater and Waste to Energy Research Program

IWWERP Celebrates a New Partnership with Digester Doc!



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 (208) 278-2651



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IWWERP Celebrates a New Partnership with Valkyrie Analytics!



VALKYRIE ANALYTICS

REVOLUTIONIZING ANAEROBIC
DIGESTION STABILITY & PROFITABILITY

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ATTACHMENT N

Office of State and Community Energy Programs

Trash To Treasure: Revitalizing Wastewater Treatment Yields Economic Opportunities in Rural Iowa Towns

JANUARY 26, 2023

Iowa is using State Energy Program funds to improve energy efficiency in wastewater treatment facilities to benefit rural communities across the state.

Striving for Equity in Rural Energy Resources

Revitalizing rural America means giving it the same access to resources and opportunities as urban areas. As part of a strategy to drive this rural-urban equity, the Iowa Economic Development Authority (IEDA), in partnership with the University of Iowa (UI), is working to develop innovative energy and wastewater solutions for rural Iowa communities where municipal wastewater treatment costs often stifle local economic vitality.

Through the Iowa Wastewater and Waste to Energy Research Program (IWWERP), IEDA and UI spearheaded the construction of a state-of-the-art tech park and have supported nearly 50 communities in improving the energy efficiency of their wastewater treatment facilities and testing new technologies to capture nutrients and generate renewable natural gas.

The U.S. Department of Energy's (DOE) [State Energy Program](#) (SEP) provided funding to support this program, which helps advance shared goals of promoting economic growth, improving environmental quality, reducing energy costs and waste, and bolstering the resilience of energy infrastructure.

What Is Wastewater and Why Treat It?

Wastewater is storm runoff and water used by homes, industries, and businesses that can be treated by removing harmful substances like excessive phosphorus and nitrogen, bacteria, viruses, mercury, lead, and more, before being released back into the environment. These substances can pollute land, water, and agriculture, making food dangerous to consume and recreation areas too polluted to enjoy.

Not only that, but poor wastewater can cause water scarcity, waste energy, and overall contribute to climate change and poor public health. Proper wastewater treatment is vital in maintaining healthy environments for humans and nature alike and ensuring water security.

Proper wastewater treatment also has a variety of economic benefits for communities. Treated wastewater is an effective fertilizer yielding healthier crops and can even be used to generate electricity. More efficient wastewater treatment can also unlock savings for ratepayers, as communities have experienced a [24% increase in wastewater treatment rates](#) from 2008 to 2016 from aging, leaky infrastructure.

As many U.S. wastewater treatment facilities are nearing the end of their lives, revitalizing them, and building new ones can increase energy efficiency and deliver lower prices for consumers, especially those in rural and low-income communities with fewer resources to upgrade facilities.

Spurring Innovation in Wastewater Treatment

The University of Iowa released a short [video highlighting the features of the Tech Park](#) and mission of IWWERP.

To better support communities' wastewater needs and spur innovation in wastewater treatment technologies, IEDA launched IWWERP in December 2020 with a \$3.8 million grant award to UI. UI then partnered with Iowa Department of Natural Resources, Iowa Water Environment Association, and Iowa Rural Water Association to construct the IWWERP Tech Park at the Iowa City Municipal Water Resource Recovery Plant.

The Tech Park features a state-of-the-art, \$1.5 million revolving algal biofilm research facility, which was commissioned in December 2022, and the UI main campus offers full-service labs for water chemistry, microbiology, algae biomass, and biogas characterizations, along with a wide range of instruments.



BES Water Solutions is working with IWWERP to optimize biological and physical-chemical treatment processes for small-town wastewater lagoons. The units can remove ammonia and suspended solids while providing pH adjustment and disinfection. Photo courtesy of Iowa Economic Development Authority.

IWWERP researchers work closely with commercial vendors, such as technology manufacturers and engineering consultants, to develop and test new and improved technologies. Five private companies are currently participating in the optimization of technologies at the IWWERP Tech Park or at field locations with IWWERP support.

Communities can also take advantage of IWWERP's comprehensive analytical capabilities and technologies to address their unique local wastewater treatment needs. As of October 2022, nearly 50 communities in Iowa have been impacted by IWWERP activities.

Reaching Clean Energy Goals

Communities that have received assistance via the first annual Great Wastewater Treatment Tour Across Iowa include:

LeClaire, North Liberty, Washington, Mount Pleasant, Pleasantville, Eldora, Sheldon, Orange City, and Atlantic.

The wastewater treatment facility in Atlantic, Iowa, which treats roughly one million gallons of wastewater per day, was the first to realize early energy savings from the Tour. The Atlantic facility implemented changes to the aeration sequence which resulted in better nutrient removal and cost savings of nearly \$5,000 per year—a significant chunk of money for a facility with an annual budget of \$95,000.

IWWERP is also working with Sioux City to improve production of renewable natural gas through co-digestion of non-municipal organic wastes. After a recent digester cleanout caused a major loss in biomethane production, IWWERP provided technical assistance to the city and helped increase renewable natural gas production by 18% and physical gas revenue by 25%.

IWWERP is a great example of how states can leverage federal funding and partnerships with industry, universities, and municipalities to empower rural communities while also cleaning the environment, generating energy and cost savings, and creating new energy opportunities. DOE looks forward to continuing its support for IEDA's efforts to expand Iowa's economy while protecting and improving Iowa's natural environment.

The DOE [State Energy Program](#) provides funding and technical assistance to all 50 states, five U.S. territories, and the District of Columbia to enhance energy security, advance state-led energy initiatives, and increase energy affordability. The State Energy Program emphasizes the state's role as the decision maker and administrator for program activities within the state that are tailored to their unique resources, delivery capacity, and energy goals.

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[Extracting resources and renewable energy from waste - YouTube](#)



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