

**State of Iowa
Energy Center Board
Meeting Minutes of November 17, 2022
at IEDA, 1963 Bell Avenue, Suite 200
Helmick Conference Room
Des Moines, Iowa
Or Via Teams Webinar**

Call to order 1:01 p.m.

Board Members Present

Troy DeJooode, Board Chair*
Stuart Anderson*
Jennifer Johnson*
Kelcey Brown*
Scott Stokes*
Terry Kouba*
Matt Washburn*
Dan Nickey*
Craig Just**

Board Members Absent

Debi Durham
Geri Huser

Iowa Economic Development Authority Staff Present

Brian Selinger
Amber Buckingham
Stephanie Weisenbach*
Lisa Connell
Kanan Kappelman
Deanna Triplett
Betty Hessing
Vicky Clinkscales
Terry Roberson*
Staci Hupp-Ballard*

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

Brenda Biddle, Iowa Utilities Board*
Alison Ver Schuer, Iowa House Democratic Caucus*
Emma Colman, Guest*
Elston Tortuga, Iowa Interfaith Power & Light*
Jessica Flannery, State of Iowa Legislature, House Democrats*
Karin Stein, Moms Clean Air Force*
Li Zhao, China Iowa Group*

*Participated via Teams

**Joined after roll call was taken

Welcome & Introductions by Board Chair Troy DeJoode

Troy DeJoode welcomed everyone to the November 17th IEC Board meeting.

Roll Call

Betty Hessing did roll call and a quorum was established.

Consideration of August 11, 2022 IEC Board Meeting Minutes

Motion by	Stuart Anderson
Motion	I move approval of the August 11, 2022 minutes as presented.
Second	Dan Nickey
Voice Vote	All ayes in favor. Motion approved.

Fiscal Update – Attachment A

Terry Roberson explained that three reports are in the packet. First, on the Iowa Energy Center's Grant Program account—that balance reflects the awards made at the last meeting and is just over a million dollars. Second, on the Energy Infrastructure Loan Program, there have been two awards made, which have both been paid. Obviously, ample funding available there for any new applications that might come in. Third, on the old Loan Program, which is mostly made-up of loans inherited in the transition of the Iowa Energy Center, receivables are down to \$1.6M and sometime before the end of this calendar year, Terry Roberson will move approximately \$970,000 from the old Loan Program into the new Loan Program, as per legislation.

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 she spent the months of October and November doing on-site monitoring visits with our grantees. She has completed about 75% of them and will finish them in December. Thus far we have travelled to Iowa State University and did all of those in a week; the University of Iowa and most of the private industry recipients. Those visits have resulted in a few no-cost extension requests and a couple budget modifications. Once all of those visits are complete, Amber Buckingham will create an Annual Report based on her findings and we will review those at the February Board meeting.

For the next round of grant funding, we will be getting the Grant Committee together to start working on the Policies and Procedures and those will also be on February's agenda for Board approval. Regarding the recently approved grants—all of those contracts have been fully executed and we have met with the recipients to discuss how to get into IowaGrants and administer their grant.

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

Grant Modification Request for 21-IEC-003 – Baldrige Environmental Services LLC - Mobile Power for Rural Wastewater Treatment and Community Resilience – Attachment B

Amber Buckingham stated Baldrige Environmental Services LLC has requested a budget modification amendment for award 20-IEC-003, Mobile Power for Rural Wastewater Treatment and Community Resilience.

The PI has indicated that they have finalized the design of a second generation microgrid that will be more efficient and more capable. Due to the enhanced designed of the microgrid, the PI is requesting to increase the Equipment budget line item by \$35,000 to \$92,500, while decreasing the Professional Services and Salaries and Wages budget line items. These changes do not impact the overall grant award request, which remains unchanged.

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 21-IEC-003; moving the requested funds from Salaries and Wages and Professional Services to Equipment.

Chair DeJooode asked if there were questions; no questions were asked.

Motion by	Dan Nickey
Motion	I move to approve the grant modification request for 21-IEC-003.
Second	Scott Stokes
Roll Call	Yes: 8 Abstain: 1

Motion approved.

Grant Modification Request for 20-IEC-016 – Iowa State University (ISU) – Improve Battery Energy Efficiency via Structural Design and 3D Printing for Electric Vehicles - Attachment C

Amber Buckingham stated Iowa State University (ISU) has requested a grant modification for award 20-IEC-016, Improve Battery Energy Efficiency via Structural Design and 3D Printing for Electric Vehicles.

The original Principal Investigator (PI) of this project, Dr. Hantang Qin has left Iowa State University and will no longer be PI on the project. ISU would like to transition the PI role to Dr. Shan Hu effective immediately. Dr. Hu is currently a Co-PI on the project and has the expertise necessary to successfully complete the project. The end date for the project is September 25, 2023.

Again, this is considered a substantive change and requires Board approval.

Staff recommendation is to approve the change of PI for 20-IEC-016, which will be effective November 17, 2022.

Chair DeJooode asked if there were questions; no questions were asked.

Motion by	Scott Stokes
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Motion I move to approve the grant modification request for 20-IEC-016.
Second Stuart Anderson
Roll Call Yes: 9 Recuse: 0
Motion approved.

Grant Modification Request for 20-IEC-019 – Iowa State University (ISU) – Paired Electrolyzer for Conversion of Crude Glycerin and Waste CO2 - Attachment D

Amber Buckingham stated Iowa State University (ISU) has requested a grant modification for award 20-IEC-019, Paired Electrolyzer for Conversion of Crude Glycerin and Waste CO2.

Iowa State University has requested a budget modification of \$10,391.23 and would like to move funds from Tuition, Supplies and Materials, Other Direct Costs and Other Direct Costs: Honoraria/Services to Indirect Costs, Payroll Benefits and Salaries and Wages. The PI has indicated the need for a final re-budget in order for the budget to match the final expenses and ensure that there are no overages.

Again, this is considered substantive and requires Board approval, as it is over \$10,000.

Staff recommendation is to approve the budget modification for 20-IEC-019, moving \$10,391.23 from Tuition, Supplies and Materials, Other Direct Costs, and Other Direct Costs: Honoraria/Services to Indirect Costs, Payroll Benefits and Salaries and Wages.

Chair DeJoode asked if there were questions; no questions were asked.
Motion by Dan Nickey
Motion I move to approve the budget modification request for 20-IEC-019.
Second Jennifer Johnson
Roll Call Yes: 9 Recuse: 0
Motion approved.

Grant Termination Request for 20-IEC-015 – Iowa State University (ISU) – Attachment E

Amber Buckingham stated the Iowa Economic Development Authority received a request from Iowa State University to terminate the agreement for grant project 20-IEC-015 effective October 31, 2022.

The above referenced agreement was made to Iowa State University in the amount of \$266,720 under the direction of Gul Kremer and Hantang Qin with an end date of September 25, 2023. Iowa State requests termination of this agreement effective October 31, 2022. Dr Gul Kremer, Hantang Qin and one of the graduate research assistants working on this project, have all left Iowa State University. Therefore, under Section 10, Termination of Agreement 20-IEC-015, ISU no longer has sufficient staffing levels adequate to fulfill the obligations of the agreement. A total of \$125,597.87 will be paid for work completed up to the agreement termination date of October 31, 2022, in accordance with Article 10

of the Grant Agreement. All unspent funds for this project will be de-obligated and returned to the grant fund.

Staff recommendation is to approve request for termination of the agreement for 20-IEC-015, effective October 31, 2022, de-obligating the remaining funds and returning them to the grant fund.

Chair DeJoode asked if there were questions. Dan Nickey asked how much the Grant Program will get back and Amber Buckingham replied that we will get back approximately \$140,000. Stuart Anderson asked if a report was provided that showed some benefit for what was expended. Amber Buckingham replied she did ask them to provide a final report based on the work they have completed and they are working on that. Stuart Anderson asked if we feel there is value of what was accomplished and Ms. Buckingham stated they created the 3D pipeline structures. The PI's may re-apply with another university in another round to continue the project. No other questions were asked.

Motion by Stuart Anderson
Motion I move to approve the request for termination of agreement for grant project 20-IEC-015.
Second Dan Nickey
Roll Call Yes: 9 Recuse: 0
Motion approved.

Energy Infrastructure Revolving Loan Program (EIRLP) – EIRLP Update –
Stephanie Weisenbach stated in this quarterly cycle of the Energy Infrastructure Revolving Loan Program we did not receive any applications. We expected to receive one application that was mostly completed on the on-line system, but they informed us they would postpone applying due to delays they were having related to the materials and the supply chain and they wanted to wait until their costs and timeframes were more certain. Support for the Loan Program remains high, especially as interest rates from the private sector lenders are increasing.

We have set the quarterly deadlines for 2023 for those application cycles and we plan to conduct additional outreach and marketing in the next two months to clarify updates to the program and follow-up with previous inquiries and plan on those future applications.

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

Proposed Updates to Policies and Procedures – Attachment F

Stephanie Weisenbach explained the policies and procedures for the Energy Infrastructure Revolving Loan Program is a document to provide the program requirements and the framework of how the program will be administered. The Administrative Rules for the EIRLP require this document to be prepared by IEDA and approved by the Board. The IEC Board approved the current version of the handbook in September 2021. This document will be reviewed and approved by the IEC Board at least once per year and will remain in effect until any changes are adopted by the Board. Staff expects to update it once per calendar year, but it may be updated more frequently if time-sensitive changes arise.

Administrative Rules for the program specify that the policies and procedures shall include the amount of program funds to be allocated for each application cycle, scoring criteria to be used if the demand for loans exceeds the amount allocated for any application cycle and the applicable interest rate or rates for approved loans.

Some of the proposed revisions originate from review of applications by staff and the Loan Committee. The Loan Committee has discussed this annual update at two recent meetings. The result is the document provided in Board Papers. If the Board approves this update, it will be posted to the program webpage and provided to interested parties.

Stephanie Weisenbach displayed and explained her PowerPoint presentation. Stephanie Weisenbach asked if anyone had questions, but no questions were asked.

Motion by	Matt Washburn
Motion	Approve the updates to IEC's Policies and Procedures.
Second	Craig Just
Voice Vote	All ayes in favor. Motion approved.

Appointment of Vice Chair - Attachment G

Lisa Connell explained former board member, Jenae Sikkink, resigned her position on the Iowa Energy Center Board as of September 20, 2022. That not only created a vacancy on the Board, but also a vacancy of the Vice Chair position. Stuart Anderson is willing to serve in that role, so that would be our recommendation that you elect Stu as your Vice Chair.

Motion by	Scott Stokes
Motion	Motion to approve appointment of Stuart Anderson as Vice Chair through June 30, 2023.
Second	Matt Washburn
Voice Vote	All ayes in favor. Motion approved.

Other Business

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

Energy Center Office Updates

Brian Selinger stated we still have two Board vacancies—Iowa State University—since Gul had left. ISU has identified their Board applicant and that individual has applied so we are waiting through that process to get that reviewed and hopefully appointed by the February Board meeting. Also, with Jenae's departure, we have the private college and university seat that is vacant. I have spoken with the Iowa Association of Independent Colleges and Universities and they are working hard to identify their preferred board applicant. I do not think they have found that individual yet, but they are working on that. Hopefully, by the February Board meeting we will have a full complement of board members.

Brian Selinger stated it is that time of year where there are a lot of annual reports due. We will be putting together our Annual Report for the Iowa Energy Center and we will get that to you guys when that is done.

Brian Selinger stated that we were able to secure the dates of our four quarterly IEC Board meetings for 2023. The dates are February 23, 2023; May 11, 2023; August 10, 2023; and November 16, 2023.

Brian Selinger stated we will be in touch with you as the February 23rd IEC Board meeting draws near.

Public Comment Period No public comments.

Chairperson DeJoode adjourned the meeting.

Adjournment 1:34 p.m.

Respectfully Submitted,
Betty Hessing, IEC Board Administrator

ATTACHMENT A

INFO

REPORT
IOWA ENERGY CENTER BOARD
NOVEMBER 2022

From: Administration – IEDA Accounting

Subject: Iowa Energy Center Financials

Energy Center financial information for FY23 thru October 31, 2022

Proposed **NO ACTION REQUIRED**
Motion:

Submitted By: Terry Roberson

Attachments: Financial reports and obligation logs for FY23

IEDA				
Financial Report				
Iowa Energy Center				
Fiscal Year 2023				
October 31, 2022				
	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	33,507	33,507	
Other Revenue YTD	0	0	0	
Deappropriations	0	0	0	
Transfers	0	0	0	
Total Revenue YTD	275,000	18,595,097	18,870,097	
<u>Expenses</u>				
Administration YTD	(42,015)	0	(42,015)	
Project Payouts YTD	0	(253,660)	(253,660)	
Leg Auth Transfers (18 Acts Ch 1172 Sec 91)			0	
Total Expense YTD	(42,015)	(253,660)	(295,675)	
<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	(253,660)	(253,660)	
Balance of Current Year Admin	232,985	0	232,985	
Net Obligations YTD	232,985	7,144,473	7,377,458	
Balance Available	0	11,196,964	11,196,964	

IEDA			
Financial Report			
Iowa Energy Center			
Fiscal Year 2023			
October 31, 2022			
ENERGY INFRASTRUCTURE REVOLVING LOAN PROGRAM			
	Admin	Projects	Total 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	25,386	25,386
Other Revenue YTD	0	0	0
Deappropriations	0	0	0
Transfers	0	0	0
Total Revenue YTD	250,000	14,182,906	14,432,906
Expenses			
Administration YTD	(7,436)	0	(7,436)
Project Payouts YTD	0	(397,150)	(397,150)
Leg Auth Transfers (18 Acts Ch 1172 Sec 91)			0
Total Expense YTD	(7,436)	(397,150)	(404,586)
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	242,564	0	242,564
Net Obligations YTD	242,564	0	242,564
Balance Available	0	13,785,756	13,785,756

IEDA					
Financial Report					
Iowa Energy Center					
Fiscal Year 2023					
October 31, 2022					
OLD					
IEC/AEL LOAN ACCT					
	Projects		Total Fund	IEDA NOTES REC	OCT 1 2017 NOTES REC
Revenue					
Cash Balance Forward	0	1,174,610	1,174,610	1,044,667	718,354
FY21 IU8 Transfer	0	0	0		0
Principal Repayments YTD	0	148,488	148,488	(66,837)	(82,051)
Interest Revenue	0	1,957	1,957		0
Other Revenue YTD	0	0	0		0
Deappropriations	0	0	0		0
Transfers	0	0	0		0
Total Revenue YTD	0	1,325,055	1,325,055	977,830	636,303
Expenses					
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		
Obligations					
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	976,245	976,245		

Iowa Energy Center Grant Program
Obligation Log
FY2020

	Project Name	Amount Awarded	Amount Recaptured		Balance
Aug-22	Iowa State University	347,530			347,530
Aug-22	Iowa State University	203,342			203,342
Aug-22	Iowa State University	200,000			200,000
Aug-22	Legov Systems Group	301,000			301,000
					0
					0
					0
					0
					0
					0
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					0
		1,051,872	0		1,051,872

ATTACHMENT B

ACTION

REPORT
IOWA ENERGY CENTER BOARD
NOVEMBER 2022

From: Iowa Energy Center

Subject: Budget Modification for 21-IEC-003

Background: Baldrige Environmental Services, LLC has requested a budget modification amendment for award 20-IEC-003 *Mobile Power for Rural Wastewater Treatment and Community Resilience*.

The PI has indicated that they have finalized the design of a second generation microgrid that will be more efficient and more capable. Due to the enhanced designed of the microgrid, the PI is requesting to increase the Equipment budget line item by \$35,000 to \$92,500, while decreasing the Professional Services and Salaries and Wages budget line items. These changes do not impact the overall grant award request, which remains unchanged at \$122,500.

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 21-IEC-003; moving the requested funds from Salaries and Wages and Professional Services to Equipment.

Proposed Motion: **Approve the Amendment to 21-IEC-003**

Submitted By: Amber Buckingham, Program Manager

Attachments: Rebudget Request from Baldrige Environmental Services LLC



1615 E Washington St, Ste. 1
Mt. Pleasant, IA 52641
www.beswatersolutions.com

To the Iowa Energy Center Board:

10/19/22

Baldrige Environmental Services (BES) is requesting an amendment to **Grant/Project: 21-IEC-003 - Mobile Power for Rural Wastewater Treatment and Community Resilience - 2021**. The reason for this amendment is to update the cost structure for the Grant.

Scope of Work:

With the use of the first generation microgrid, BES and Iowa State University (ISU) have collaborated to design a second generation microgrid that will be more efficient, as well as more capable. This system looks to also have the option to remove the palletized batteries that could be used in a disaster recovery situation if needed, and then return them to the microgrid to be recharged. This second generation microgrid will be built by BES, with assistance from Nicholas David of Iowa State University.

Budget Changes:

There have been changes in the projected areas:

Solar Equipment - Increase \$35,000 to a total of \$92,500

Professional Services:

Electrical Contractor - Decrease \$7,814 to a total of \$12,186

Remote Monitoring - Decrease \$11,900 to a total of \$3,100

Salaries and Wages:

Installation and Support - Decrease \$15,286 to a total of \$14,714

With these changes the total requested amount is unchanged at \$122,500 for the grant totality.

We are also requesting an extension of 1 year to the grant.

Sincerely,

A handwritten signature in blue ink, appearing to read "Randy Seberg".

Randy Seberg
Managing Director
Baldrige Environmental Services, LLC

ATTACHMENT C

ACTION

**REPORT
IOWA ENERGY CENTER BOARD
NOVEMBER**

From: Iowa Energy Office

Subject: 20-IEC-016 Grant Modification

Background: Iowa State University (ISU) has requested a grant modification for award 20-IEC-016 *Improve Battery Energy Efficiency via Structural Design and 3D Printing for Electric Vehicles*

The original Principal Investigator (PI) of this project, Dr. Hantang Qin has left Iowa State University and will no longer be PI on the project. ISU would like to transition the PI role to Dr. Shan Hu effective immediately. Dr. Hu is currently a Co-PI on the project and has the expertise necessary to successfully complete the project. The end date for the project is 09/25/2023.

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 20-IEC-016, which will be effective November 17, 2022.

Proposed Motion: Approve the grant modification request for 20-IEC-016

Submitted By: Amber Buckingham

Attachments: 20-IEC-016 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

August 8, 2022

Amber Buckingham
Amber.Buckingham@IowaEDA.com

SUBJECT: Award Number: 20IEC016
Request for No-Cost Extension and PI Change
ISU Account: AWD-023370 ISU ID: 148594
ISU PI: Hantang Qin

Dear Amber Buckingham,

The above referenced award was made to Iowa State University and has a current end date of 9/25/2022. I am in receipt of a letter from the Principal Investigator, Hantang Qin, requesting a 6 month no-cost extension to complete the work being undertaken on this project. In addition, Dr. Qin is leaving Iowa State University and we would like to change the Lead PI on the project to Dr. Shan Hu.

The project has a bit of delay due to covid-related delays such as delays in shipping of supplies, etc. A no-cost 6-month contract extension is requested. We have previously communicated with Iowa Energy Center on 6-month delays in the last round of reporting.

We request that Dr. Shan Hu take over as lead Project Director. Dr. Hu's signature below signifies her willingness to take over as the lead Project Director. Attached below is Dr. Hu's curriculum vitae.

Iowa State University has carefully reviewed the requests and concurs therein. **We request the termination date be changed from 9/25/2022 to 3/25/2023 and we request that the lead Project Director be changed from Dr. Hantang Qin to Dr. Shan Hu.** 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,



Shan Hu
Associate Professor,
Mechanical Engineering



Digitally signed by Amy
Arndorfer
Date: 2022.08.08
16:18:07 -05'00'

Amy Arndorfer
Award Administrator

cc: Shan Hu
Ying Li
Melissa Gagne
ENGR RRC

NAME: Shan Hu

POSITION TITLE & INSTITUTION: Associate Professor, Iowa State University

A. PROFESSIONAL PREPARATION - (see [PAPPG Chapter II.C.2.f.\(i\)\(a\)](#))

INSTITUTION	LOCATION	MAJOR/AREA OF STUDY	DEGREE (if applicable)	YEAR (YYYY)
Harbin Institute of Technology	Harbin, China	Instrumentation and Control Technology	BS	2007
University of Minnesota	Duluth, MN	Engineering Management and Electrical Engineering (minor)	MS	2009
University of Minnesota	Minneapolis, MN	Mechanical Engineering	PhD	2014

B. APPOINTMENTS - (see [PAPPG Chapter II.C.2.f.\(i\)\(b\)](#))

From - To	Position Title, Organization and Location
2020 – present	Associate Professor, Iowa State University (ISU)
2014 - 2020	Assistant Professor, ISU
2013-2014	Doctoral Dissertation Fellow, University of Minnesota Twin Cities
2010-2013	Graduate Research Assistant, University of Minnesota Twin Cities
2007-2009	Graduate Research Assistant, University of Minnesota Duluth

C. PRODUCTS - (see [PAPPG Chapter II.C.2.f.\(i\)\(c\)](#)) Products Most Closely Related to the Proposed Project

* Corresponding author(s)

1. Chen, Bolin, Yizhou Jiang, Xiaohui Tang, Yayue Pan, and Shan Hu*. "Fully packaged carbon nanotube supercapacitors by direct ink writing on flexible substrates." *ACS applied materials & interfaces* 9, no. 34 (2017): 28433-28440.
2. Tang, Xiaohui, Yu Hui Lui, Bolin Chen, and Shan Hu*. "Functionalized carbon nanotube based hybrid electrochemical capacitors using neutral bromide redox-active electrolyte for enhancing energy density." *Journal of Power Sources* 352 (2017): 118-126.
3. Hu, Shan, Rajesh Rajamani*, and Xun Yu. "Flexible solid-state paper based carbon nanotube supercapacitor." *Applied Physics Letters* 100, no. 10 (2012): 104103.
4. Lu, Lu, Xiaohui Tang, Shan Hu, and Yayue Pan*. "Acoustic field-assisted particle patterning for smart polymer composite fabrication in stereolithography." *3D Printing and Additive Manufacturing* 5, no. 2 (2018): 151-159.
5. Jiang, Yizhou, Shan Hu, and Yayue Pan*. "A normalized trace geometry modeling method with bulge-free analysis for direct ink writing process planning." *3D Printing and Additive Manufacturing* 5, no. 4 (2018): 301-310.

Other Significant Products, Whether or Not Related to the Proposed Project

* Corresponding author(s)

1. Zhang, Bowei, Yu Hui Lui, Hongwei Ni, and Shan Hu*. "Bimetallic (Fe_xNi_{1-x}) 2P nanoarrays as exceptionally efficient electrocatalysts for oxygen evolution in alkaline and neutral media." *Nano Energy* 38 (2017): 553-560.
2. Zhang, Bowei, Kun Jiang, Haotian Wang, and Shan Hu*. "Fluoride-induced dynamic surface self-reconstruction produces unexpectedly efficient oxygen-evolution catalyst." *Nano letters* 19, no. 1 (2018): 530-537.
3. Zhang, Bowei, Zhiyuan Qi, Zishan Wu, Yu Hui Lui, Tae-Hoon Kim, Xiaohui Tang, Lin Zhou, Wenyu Huang, and Shan Hu. "Defect-rich 2D material networks for advanced oxygen evolution catalysts." *ACS Energy Letters* 4, no. 1 (2018): 328-336. - Featured as cover piece.
4. Zhang, Bowei, Yu Hui Lui, Lin Zhou, Xiaohui Tang, and Shan Hu*. "An alkaline electro-activated Fe-Ni phosphide nanoparticle-stack array for high-performance oxygen evolution under alkaline and neutral conditions." *Journal of Materials Chemistry A* 5, no. 26 (2017): 13329-13335.
5. Zhang, Bowei, Chongqin Zhu, Zishan Wu, Eli Stavitski, Yu Hui Lui, Tae-Hoon Kim, Huan Liu, Lin Zhou, Kun Jiang, Wenyu Huang, Shan Hu*, Hailiang Wang*, and Joseph S. Francisco*. "Integrating Rh species with NiFe-layered double hydroxide for overall water splitting." *Nano letters* 20, no. 1 (2019): 136-144.

D. SYNERGISTIC ACTIVITIES - (see [PAPPG Chapter II.C.2.f\(i\)\(d\)](#))

- Served as Associate Editor for the Modeling, Estimation and Control Conference (MECC 2021)
- Developed and presented education module "Building a Battery from Things in Your Kitchen" for K-12 students, at the Iowa's STEM Festival in 2019 and at the Go Further: Girls STEM Conference at ISU in 2020.
- Served as judge for the State Science + Technology Fair of Iowa in 2021.
- Mentor 2 community college student researchers, Mr. Joseph Filbert, a Naval veteran, and Mr. Ahmed Gesalla, an African-American student and 1st generation college student, through the MOSAIC REU program at Department of Mechanical Engineering, ISU, summer 2015, 2017.
- Host a high school student (female) participating in Young Engineers and Scientists Program at NSF Engineering Research Center for Biorenewable Chemicals, summer 2015.

ATTACHMENT D

ACTION

REPORT
IOWA ENERGY CENTER BOARD
NOVEMBER 2022

From: Iowa Energy Office
Subject: 20-IEC-019 Grant Modification Request

Background: Iowa State University (ISU) has requested a budget modification amendment for award 20-IEC-019 *Paired Electrolyzer for Conversion of Crude Glycerin and Waste CO2*.

Iowa State University has requested a budget modification of \$10,391.23 and would like to move funds from Tuition, Supplies and Materials, Other Direct Costs, and Other Direct Costs: Honoraria/Services to Indirect Costs, Payroll Benefits, and Salaries and Wages. The PI has indicated the need for a final rebudget in order for the budget to match the final expenses and ensure that there are no overages.

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 budget modification is over \$10,000 it is considered substantive and requires Board approval.

Staff Recommendation: Approve the budget modification for 20-IEC-019, moving \$10,391.23 from Tuition, Supplies and Materials, Other Direct Costs, and Other Direct Costs: Honoraria/Services to Indirect Costs, Payroll Benefits, and Salaries and Wages.

Proposed Motion: Approve the Budget Modification Request for 20-IEC-019

Submitted By: Amber Buckingham
Attachments: 20-IEC-019 Budget 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

September 29, 2022

Iowa Economic Development Authority
Attn: Amber Buckingham
200 East Grand Avenue
Des Moines, IA 50309

SUBJECT: **Grant Number: 20-IEC-019**
 Grant Title: Paired Electrolyzer for Conversion of Crude Glycerin and Waste CO2
 Revised Budget Request
 ISU Account: 023355 **ISU ID: 149632**
 ISU PI: Dr. Wenzhen Li

Dear Amber Buckingham:

The above referenced grant was made to Iowa State University in the amount of \$156,000 under the direction of Dr. Wenzhen Li. Dr. Li has requested to rebudget funds on this project. The PI's justification for the changes in budget are as follows:

The PI is asking for a final rebudget in order for the revised 2nd rebudget to match final expenses on the award. This will ensure that there are no overages in any budget category for IEDA upon grant completion. Final invoices will be submitted once the rebudget is finalized.

Attached, please find a detailed budget that outlines these budget changes.

We at Iowa State University have reviewed Dr. Li's request and concur therein. Therefore, we request approval for the attached revised budget. If I can provide you with additional information or be of further assistance, please do not hesitate to contact me.

Sincerely,



Kim Robson
Award Administrator
Office of Sponsored Programs Administration

cc: Wenzhen Li
 Mary Scott-Hall
 Scott Mosely
 Kristen Doerder
 Jeremy Neppl

Category	Original budget	1st rebudget approved 3/4/2021	Revised original budget	Budget category change request 5/17/2022	2nd rebudget approved 9/6/2022	Budget category change request 9/10/2022	Revised 3rd rebudget
Award	\$156,000.00			\$0.00	\$156,000.00	\$0.00	\$156,000.00
ISU Object Class Set: Honoraria/Services	\$0.00		\$0.00	\$17,000.00	\$17,000.00	(\$1,642.87)	\$15,357.13
ISU Object Class Set: Indirect Cost	\$31,200.00		\$31,200.00	\$0.00	\$31,200.00	\$0.22	\$31,200.22
ISU Object Class Set: Other Direct Costs	\$0.00		\$0.00	\$410.00	\$410.00	(\$0.27)	\$409.73
ISU Object Class Set: Payroll Benefits	\$8,218.00		\$8,218.00	\$11,733.00	\$19,951.00	\$2,333.23	\$22,284.23
ISU Object Class Set: Salaries/Wages	\$65,615.00		\$65,615.00	\$2,309.00	\$67,924.00	\$8,057.78	\$75,981.78
ISU Object Class Set: Student Tuition	\$25,717.00		\$25,717.00	(\$23,780.00)	\$1,937.00	(\$0.43)	\$1,936.57
ISU Object Class Set: Supplies/Materials	\$19,250.00	\$3,000.00	\$22,250.00	(\$4,672.00)	\$17,578.00	(\$8,747.66)	\$8,830.34
ISU Object Class Set: Travel - Domestic	\$6,000.00	(\$3,000.00)	\$3,000.00	(\$3,000.00)	\$0.00	\$0.00	\$0.00
Totals	\$156,000.00	\$0.00	\$156,000.00	\$0.00	\$156,000.00	\$0.00	\$156,000.00

ATTACHMENT E

ACTION

REPORT
IOWA ENERGY CENTER BOARD
NOVEMBER 2022

From: Iowa Energy Center

Subject: Agreement Termination for 20-IEC-015

Background: The Iowa Economic Development Authority received a request from Iowa State University to terminate the agreement for grant project 20-IEC-015 effective October 31, 2022.

The above referenced agreement was made to Iowa State University in the amount of \$266,720 under the direction of Gul Kremer and Hantang Qin with an end date of September 25, 2023. Iowa State requests termination of this agreement effective October 31, 2022. Dr Gul Kremer, Hantang Qin and one of the graduate research assistants working on this project, have all left Iowa State University. Therefore, under Section 10, Termination of Agreement 20-IEC-015, ISU no longer has sufficient staffing levels adequate to fulfill the obligations of the agreement. A total of \$125,597.87 will be paid for work completed up to the agreement termination date of October 31, 2022, in accordance with Article 10 of the Grant Agreement. All unspent funds for this project will be de-obligated and returned to the grant fund.

Recommendation: Staff recommends approving the request for termination of the agreement, effective October 31, 2022, de-obligating the remaining funds and returning them to the grant fund.

Proposed Motion:	Approve the Request for Termination of Agreement for Grant Project 20-IEC-015.
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Submitted By: Amber Buckingham, Program Manager

Attachments: 20-IEC-015 Termination 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

November 7, 2022

Amber Buckingham
Program Manager, Energy Team
Iowa Economic Development Authority
1963 Bell Avenue, Suite 200
Des Moines, IA 50315

SUBJECT: Agreement 20-IEC-015, Termination Request
ISU AWD-023371; ISU ID 148494
ISU PI: Gul Okudan-Kremer

Dear Amber:

The above referenced agreement was made to Iowa State University in the amount of \$266,720 under the direction of Dr. Gul Okudan-Kremer with a current end date of September 25, 2023.

Iowa State University requests termination of this agreement effective October 31, 2022. Dr. Okudan Kremer, co-PI Hantang Qin, and one of the graduate research assistants working on this project have all left Iowa State University. Therefore, under Section 10 (Termination) of agreement 20-IEC-015, ISU no longer has sufficient staffing levels adequate to fulfil the obligations of this agreement (10.1D).

Please let me know if any additional information is required by IEDA for consideration of this termination request. Thank you.

Sincerely,


Marva Ruther
Senior Award Administrator
Office of Sponsored Programs Administration

Digitally signed by Marva Ruther
Location: Senior Award
Administrator, Office of
Sponsored Programs
Administration, Iowa State
University
Date: 2022.11.07 15:57:53 -06'00'

c: Arun Somani
Cheryl Sansgaard

ATTACHMENT F

ACTION

REPORT
IOWA ENERGY CENTER BOARD
NOVEMBER 2022

From: Stephanie Weisenbach, Program Manager

Subject: Proposed Updates to Policies and Procedures Handbook

The policies and procedures for the Energy Infrastructure Revolving Loan Program is a document to provide the program requirements and the framework of how the program will be administered. The administrative rules for the EIRLP require this document to be prepared by IEDA and approved by the board. The IEC Board approved the current version of the handbook in September 2021. This document will be reviewed and approved by the IEC Board at least once per year and will remain in effect until any changes are adopted by the board. Staff expects to update it once per calendar year. It may be updated more frequently if time-sensitive changes arise.

Administrative rules for the program specify that the policies and procedures shall include the amount of program funds to be allocated for each application cycle, scoring criteria to be used if the demand for loans exceeds the amount allocated for any application cycle, and the applicable interest rate or rates for approved loans.

Some of the proposed revisions originate from review of applications by staff and the Loan Committee. The Loan Committee has discussed this annual update at two recent meetings. The result is the document provided in Board Papers. If the board approves this update, it will be posted to the program webpage and provided to interested parties.

Proposed Motion: “Approve updates to the EIRLP policies and procedures”

Submitted By: Stephanie Weisenbach

Attachments: Slides: Key Revisions to EIRLP Policies and Procedures
PDF: November 2022 EIRLP Policies and Procedures Handbook

The Energy Infrastructure Revolving Loan Program (EIRLP) is administered pursuant to Iowa Code section 476.46A as enacted by [2021 Iowa Acts, Senate File 619](#). The EIRLP administrative rules can be found in Iowa Administrative Code section 261.406.

The Energy Infrastructure Revolving Loan Program (EIRLP) was enacted in the 2021 Iowa legislative session and is administered by the Iowa Energy Center (IEC) within the Iowa Economic Development Authority (IEDA). The program can provide loans for the development and construction of energy infrastructure. Energy infrastructure is defined in Iowa Code as “land, buildings, physical plant and equipment, and services directly related to the development of projects used for, or useful for, electricity or gas generation, transmission, storage or distribution.” Additional information about eligible projects can be found later in this document. Applicants are encouraged to contact IEDA staff with questions about project eligibility and complete a project questionnaire in advance of application submittal.

The EIRLP will accept applications on a rolling basis with deadlines provided on IEDA's webpage. These deadlines are based on when an application must be submitted to be considered at the upcoming IEC board meeting. The IEC Board has a designated Loan Committee comprised of board members involved with review and recommendation for program applications. The IEC Board will make funding announcements at least once per quarter.

Policies and Procedures

The policies and procedures for the EIRLP provide the program requirements and the framework of how the program will be administered within three main categories of Program Details, Application Process and Administration. This document will be reviewed and approved by the IEC Board at least once per year and will remain in effect until any changes are adopted by the board. This guide does not replace administrative rules or Iowa Code regarding the EIRLP. If a conflict exists, Iowa Code or the administrative rules will prevail.

PROGRAM DETAILS

Funding Available

Approximately \$14 million is available in the EIRLP as of the start of the current state fiscal year of July 1, 2022. The IEC Board may approve up to \$10 million in loans per quarter until funds are obligated or otherwise budgeted for administrative costs.

Interest Rate

The IEC will offer a 2% interest rate to applicants. This rate will be considered the standard interest rate for the program. The interest rate shall not exceed the Wall Street Journal prime rate as of the date of the IEC Board approval of the loan.

Eligible and Ineligible Borrowers

Eligible borrowers include:

- Businesses incorporated or organized in Iowa or authorized to do business in Iowa, including businesses operated as sole proprietorships with a registered trade name
- Rural electric cooperatives
- Municipal utilities

Ineligible borrowers include:

- A business that is not located in or operating in Iowa. A business that will be located and operating in Iowa upon completion of an eligible project may be eligible.
- An individual or an organization with a history of defaulted loans or compliance violations with other state programs or rules.
- Regents institutions
- Community colleges
- State agencies
- Cities, except municipal utilities that are eligible borrowers pursuant to 261 IAC 406.4(1)“c”
- Counties
- School districts
- Nonprofit organizations

Loan Amounts

The minimum loan amount is \$50,000 and the maximum is \$2.5 million. Some restrictions apply to loans over a certain size:

- Loan requests that exceed \$1 million must demonstrate broad reaching benefits for the state, local community and/or ratepayers. The use of estimated metrics to demonstrate these benefits and the need for loan funds to assist will be expected. For example, resilience projects by municipal utilities and rural electric cooperatives can estimate outages reduced and describe how underserved customers will be benefitted.
- Loan requests that exceed \$500,000, which also pledge real property as collateral will be required, if approved, to obtain a lender certificate from Iowa Title Guaranty as a condition to disbursement. This is described later in this handbook.

An applicant may apply for a loan for up to 75% of the total cost of the project. The remainder of the project cost not financed by the EIRLP may include costs otherwise considered ineligible for EIRLP which may include documented "soft" costs including feasibility studies, engineering and final design, permitting and regulatory costs, or other determined by the board to be necessary for the development of energy infrastructure and the project described in the application. The committee may exclude certain types of costs from being included as matching funds.

The Loan Committee may recommend that a reduced loan amount be recommended to the IEC Board, if the Committee finds any of the following to be true:

- The project type and borrower would be able to secure other financing for more of their project costs and retain its feasibility and return on investment.
- The loan funds would be able to support more projects or a variety of projects should one or more of the loan amounts be reduced.
- The applicant has received one or more previous award(s) from the program with an outstanding balance. Additional restrictions may apply to these applicants.

Eligible and Ineligible Costs

Examples of eligible costs include, but are not limited to:

- Real and personal property comprising a project.
- Materials and equipment required for necessary site preparation, construction and installation of a project.
- Labor for site preparation, construction and installation of a project.
- Costs associated with maintenance, operation or repair of a project during the term of the loan.

Examples of project costs that are not eligible for financial assistance include, but are not limited to:

- Administrative costs not associated with site preparation, construction and installation of a project, including employee salaries of the borrower or any affiliates.
- Costs incurred prior to the committee's recommendation to approve a loan. Costs incurred prior to the committee's recommendation may be eligible for assistance if the borrower demonstrates the prior costs were necessary. Examples of potentially eligible costs incurred prior to the committee's recommendation may be a deposit on equipment or securing a contractor for the proposed project schedule, preliminary engineering and construction costs that are preparing the project site for readiness. Costs incurred after the committee's recommendation of the loan and before an IEC Board award date are at the applicant's own risk in the event that the board declines the approval recommendation from the committee.
- Feasibility studies
- Engineering and final design
- Permitting or regulatory costs
- Other costs that the board determines to be ineligible

Ineligible "soft" costs listed above may be included as match. Other examples of soft costs include developer fees, legal fees, consultant fees and fees related to securing collateral. Any proposed cost for fiber extension if necessary for utility grid modernization projects will be evaluated on a case-by-case basis.

Collateral

The IEC Board will not issue a loan that exceeds the value of the collateral provided. The board may consider the borrower's credit rating (or bond rating, if applicable) in determining what form of collateral is acceptable. Certain forms of collateral may require costs to be incurred by the applicant prior to disbursement. The following forms of collateral will be accepted:

- Real property: This must be buildings and/or land that can be secured through a mortgage held by IEDA. A lien on project-financed equipment could be provided in combination with the real property but not as a standalone form of collateral. IEDA must be satisfied there is sufficient equity in the property to cover the EIRLP loan in the event of default, taking into account other liens and/or mortgages on the property when determining equity.
- Dedicated certificate of deposit: This requires the applicant to deposit an amount into an account at a financial institution which secures funds for a specific period of time, in this instance the loan maturity date. These typically get better interest rates than savings accounts, providing a financial benefit if the borrower has the resources to put into a dedicated CD.
- Irrevocable letter of credit: This is a letter signed by the borrower's bank that authorizes IEDA to draw funds of a sum not to exceed the loan amount in the event of default of the loan agreement with IEDA. This is the preferred form of collateral.
- Corporate guarantee: This must be provided by a separate corporation that has different ownership from the borrower. A letter from this corporation should be provided in the application that pledges their guarantee if the loan is awarded.
- Utility revenue or reserve funds, if applicable. This option is only applicable for projects that have a source of revenue or reserve funds as a utility or a borrower that has a power purchase agreement that could be reassigned to IEDA in the event of default.
- Other forms of collateral if approved by the board, and only if the forms of collateral listed above are inadequate.

Loan Term

The duration of the loan will typically be 5 to 10 years, but shall not exceed 15 years. To determine the loan term, the Loan Committee will consider cash flow factors including the applicant's requested term, tax credits, projected revenue or savings, and other financing. The IEC's loan may, in some instances, be paid back before the applicant sees their own payback for the project.

Project Eligibility Overview

The borrower shall demonstrate all the following criteria are met:

- The project is located in Iowa or for the primary use or benefit of Iowans. If any portion of the project is located outside of Iowa, the applicant bears the burden of demonstrating that the project as a whole will be for the primary use or benefit of Iowans.
- The project develops energy infrastructure as defined in Iowa Code section 476.46A(3)(a).
- The borrower must be the owner, contract purchaser, lessee, or other interest holder of the real property where the project is located.

A project that generates energy for use only at a borrower's personal residence is not an eligible project.

Project Purpose

A variety of projects may meet the program purposes as specified in Iowa Code, which relate to the Iowa Energy Plan, in addition to energy infrastructure definitions. The table below is provided to illustrate potential examples but is not all inclusive. Applicants will be asked to demonstrate which purpose(s) their project fulfills. The third purpose of energy sector workforce development can be selected in addition to another purpose if they have integrated it into their project.

Project Purpose	Examples	Does Not Include
Electric or gas generation, transmission, storage, or distribution	<ul style="list-style-type: none"> • Infrastructure upgrades or expansion necessary for new modernization or energy generation projects • Virtual pipeline distribution • Carbon management pilot projects • Industrial location or expansion projects in areas with capacity constraints • Energy generation, transmission or distribution projects with community/public users and and benefits 	<ul style="list-style-type: none"> • Solar for a private user without additional innovative technologies/ approaches • Natural gas or transmission projects considered routine/ common updates • Energy infrastructure for business location or expansion projects not tied to IEDA's business development priorities*
Electric grid modernization	<ul style="list-style-type: none"> • Equipment managed by utility to manage peak loads, either as part of their system or customer-sited • Software used to improve cybersecurity • Infrastructure/software to optimize use of energy generation resources, which may include fiber 	<ul style="list-style-type: none"> • Fiber improvements without electric grid improvements
Energy sector workforce development	<ul style="list-style-type: none"> • Integrating workforce training and/or certification into energy infrastructure planning and construction • Hiring additional contractor(s) for training purposes on a project • Building a training facility for line workers/ electricians to learn about emerging energy technologies 	<ul style="list-style-type: none"> • Energy sector training that does not include developing an infrastructure project
Emergency preparedness for rural and underserved areas	<ul style="list-style-type: none"> • Equipment to detect outages on service lines • Infrastructure to improve resilience • Remote power and storage solutions • Electric emergency vehicles with exportable power 	<ul style="list-style-type: none"> • Conventional vehicle acquisition • Emergency radios
Expansion of biomass, biogas, and renewable natural gas	<ul style="list-style-type: none"> • Anerobic digesters (AD) and associated equipment • Infrastructure upgrades to connect production to market • Biomass production costs necessary to enter energy market or be deployed for carbon sequestration 	<ul style="list-style-type: none"> • Maintenance of existing AD facilities • Ethanol and biodiesel refineries
Innovative technologies	<ul style="list-style-type: none"> • Energy storage (batteries) and improvements to accommodate it • Combined Heat and Power • District energy systems • Microgrids 	<ul style="list-style-type: none"> • Technologies with an established market and sources of financing in Iowa • Technologies that conflict with laws or regulations and do not have a plan for compliance
Development of infrastructure for alternative fuel vehicles	<ul style="list-style-type: none"> • Electric vehicle charging infrastructure • Hydrogen fueling stations when powered with electricity and/or natural gas 	<ul style="list-style-type: none"> • Ethanol or biodiesel storage or stations

*IEDA business development priorities could include a project that is receiving other assistance from IEDA for business expansion within Iowa's targeted industries (advanced manufacturing, biosciences, insurance/financial services) or one of [Iowa's Certified Sites](#).

Application Evaluation

Any project under review of the program shall meet at least one of the following evaluation criteria with a narrative provided in the application about how it achieves one of the necessary objectives. Staff and the Loan Committee will conduct further evaluation to ensure at least one of the criteria is met for any project recommended for approval by the IEC Board.

- The project demonstrates broad reaching benefits to the state, local community and/or utility ratepayers.
- The project demonstrates a creative or innovative approach to a need or problem.
- The project demonstrates assistance is necessary to reduce the project's risks.

Applicants requesting a loan over \$1 million will be required to meet the first criteria at a minimum. These three criteria may be used to score loan applications in a given cycle if the demand for loans exceeds the amount allocated. Staff and the Loan Committee will conduct additional evaluation of applications as described further in the Application Process section of these policies and procedures.

APPLICATION PROCESS

Overview

Applications will be available and accepted through IowaGrants.

- The IEC will review applications and make funding decisions.
- Applications will only be accepted during the established application period, as identified at iowaeda.com
- Applicants planning to apply must create an IowaGrants account. The IowaGrants account will be used for claims and reporting for approved borrowers; therefore, the individual registering for IowaGrants on behalf of the applicant should be prepared to also conduct post-award reporting, if applicable. More than one registered individual can have access to the IowaGrants account for the project.
 - 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.

Waiver Requests

The IEC Board may consider requests to waive administrative rules pursuant to [261 Iowa Administrative Code Chapter 199](#).

Energy Project Questionnaire

Applicants may submit an energy project questionnaire so staff can provide technical assistance feedback on eligibility prior to submission of an application. The questionnaire may also be used to solicit feedback from the committee or as a supplement to a waiver request as described above.

Application Process

- Applications will be completed via IowaGrants. IEDA will communicate the application submission deadlines and other application details to prospective applicants through the program webpage. 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. Ineligible and/or incomplete applications may be denied by staff.
- IEDA staff will then review the applications, consulting with Iowa Finance Authority staff as needed, and prepare analysis for the committee. Staff included in the review may include:
 - Program Manager
 - Other Energy Office Program Managers
 - Team Leader
 - Legal Counsel
 - Underwriter
 - Business Finance Staff

- The authority or board may engage outside reviewers to complete technical, financial, or other reviews of applications beyond the expertise of the board and authority staff. This may delay the published timeline.
- Eligible applications will be evaluated using information provided in the application, any responses to follow up questions by the program manager, and additional analysis and research conducted in the review process. The necessary factors include:
 - The applicant, any of its project partners, and ability to repay loan: previous loans through IEDA or the Iowa Energy Center, financial statements, any history of violations with the state of Iowa, project partners. IEDA may conduct a credit report of the applicant or request such report be conducted by a credible reporting agency.
 - Project planning: level of planning and engineering needed and completed thus-far, regulatory or permitting considerations, financial analysis completed, property and project partner status. The project timeline and anticipated disbursement request date will be evaluated.
 - Project purpose and evaluation criteria: The project must fulfill at least one of the purposes listed Iowa Code 476.46A(1)“c” as enacted by 2021 Iowa Acts, Senate File 619 and at least one of the criteria listed in the Application Evaluation section on page 6. The evaluation criteria will be supported by data and information in the application, additional research and analysis conducted by staff if needed.
 - Pledged collateral: pledged collateral is one of the acceptable types, whether confirmation of pledged collateral is provided in the application (e.g., bank commitment letter indicating an Irrevocable Letter of Credit will be available) or by additional information as requested by staff and Committee. Applicants pledging real property for collateral will be expected to provide additional information about the proposed collateral and its value, as well as agree to the associated conditions to disbursement if awarded the loan.
 - Project funding sources/financing: availability of funding such as loans or private investment, confirmation of availability or timeline for securing. The IEC Board may approve an application prior to an applicant securing matching funds, but IEDA will not disburse funds until such funding is obtained. Applicants who plan to utilize tax credits must have funding available for their match to cover necessary project costs before tax credits can be claimed.
- Projected payback and cash flow: the financial factors unique to the project and any associated financial projections provided in the application will be utilized to assess the project cash flow. This will inform the recommended loan term to allow the EIRLP loan to be repaid while retaining viability for the project and applicant. This may result in the EIRLP loan seeing a payback quicker than the applicant.
- Energy attributes: proposed equipment and infrastructure components (e.g., warranty, reliability of manufacturer), any energy generation or delivery metrics and their data source.
- The Loan Committee will review all of the applications, evaluate using the established criteria and other information provided by staff, and make a recommendation to the full board. The Loan Committee will also evaluate whether costs incurred before the Committee review are allowable, determine loan term and amount, interest, any additional conditions to disbursement or alteration of disbursement schedule and any final negotiation between IEDA staff and applicant.
- The Program Manager will summarize the applications and Committee recommendations for the IEC Board.
- The IEC Board will review all applications and the recommendations from the loan committee and vote on each application.
- IEDA will notify applicants in writing of the board’s approval or denial of an application. If the application is approved, the notice will include any conditions and terms of the loan.

ADMINISTRATION

Borrowers are required to meet certain conditions before a contract is signed and/or before funds are dispersed to the borrower. All borrowers are required to secure pledged collateral before disbursement of funds. Examples of other conditions include, but are not limited to, evidence that other financing or funding sources listed in application have been approved, any necessary permitting or regulatory approvals have been secured.

Agreement

After notifying the borrower of an award, IEDA will offer a contract to the borrower, which will be between the borrower and IEDA. The borrower must return the agreement to the IEDA within 90 days of the transmittal of the agreement. Failure to return the agreement may be cause for the IEC Board to terminate the award.

Conditions to Disbursement

The obligation of IEDA to disburse funds is contingent upon receipt of certain documentation as outlined in the agreement, if not already provided in the application, and determined to be acceptable, or available through other means. Recipients will receive further instruction from the program manager about the content and procedure associated with fulfilling the conditions to disbursement.

The following items are required before a claim can be processed:

- Documentation required for conditions to disbursement as detailed in the agreement, including but not limited to securing project collateral.
- A W9 from the recipient.
- Direct deposit authorization form if the preferred payment method is direct deposit.
- A General Account Expenditures (GAX) Form with a Vendor Code provided by IEDA after W9 submission.
- Any release of information documents requested by IEDA.
- Any conditions determined by the IEC Board on the date of approval.

Securing the required collateral for the project may entail expenses being incurred by the applicant. Most forms of collateral will require execution of additional documents, utilizing templates to be provided by IEDA such as the irrevocable letter of credit. Real property as collateral has additional requirements to be met, in part to ensure that the value of collateral meets or exceeds the loan amount approved by the IEC Board and IEDA has the expected priority position among lienholders. These include but may not be limited to:

- For mortgage on a property that is not in first position, an account statement verifying how much is owed to other lender(s) in a senior position to IEDA.
- A recent appraisal for the property.
- For projects requesting between \$50,000 and \$500,000, a title of opinion from an Iowa licensed attorney, which must be certified at least through the recording date and time of the mortgage filing.
- For projects requesting over \$500,000, a lender certificate from Iowa Title Guaranty. This provides more coverage to IEDA as the lender as it provides coverage against rights of parties in possession unforeseen at the time of application to EIRLP, affirmative coverage against survey issues and mechanic lien claimants.
- For any equipment or removable infrastructure, IEDA may require an independent estimate of the projected future value including depreciation.

Disbursement of Funds/Claims

- Disbursement requests can be made prior to project completion if included in approved application. Most disbursements will occur in one lump sum with the anticipation that project will be commenced and/or completed soon thereafter. Applicants may request the lump sum disbursement for less than their loan amount if circumstances have changed including project costs being lower than previously estimated or an increase in matching funds. If the recipient fails to request disbursement according to the timeline provided in the application, the recipient must provide an update no less than quarterly to IEDA regarding the deviation from the approved timeline and updates on the plan to implement the project.
- Any funds not requested for disbursement within one year of the board approval date may be subject to deobligation and termination of the loan agreement.

Reporting Requirements and Monitoring

- A start up report is due within 60 days of the date the project is placed in service or operational. The report must include, but is not limited to, documentation of project costs and related invoices, one or more photographs, description of unanticipated challenges and lessons learned.
- IEDA may conduct a site visit of awarded projects to ensure the projects were built as proposed and to provide verification of ongoing operation. IEDA project manager will notify the Recipient at least seven business days in advance of a site visit.

- Additional reports, no more than once/year, may be required by IEDA, depending on the project type and potential needs to demonstrate compliance with program requirements and plans provided in the application. IEDA also may require reports to provide energy and cost data, project outcomes and lessons learned.
- If the Program Manager believes that the project is not being implemented according to the award approved by the board or subsequent approved modifications, the Program Manager will contact the Recipient and attempt to obtain a written explanation. IEDA will notify the Loan Committee and/or IEC Board of any ongoing performance and/or reporting issues.
- IEDA and the Iowa Energy Center may use any data, information and photographs provided by the recipient for educational purposes unless otherwise specified in the loan agreement.

Amendments

Any substantive change to a funded IEC EIRLP project, including award amount, loan term, interest rate, or alterations to proposed activities, will be considered an agreement amendment. The Recipient shall request an amendment in writing and submit an amendment request in IowaGrants. Once the amendment request is received, staff will review and determine if the request requires IEC Board approval. If it does, IEDA staff will place the amendment request on the agenda for the next scheduled IEC Board meeting. If staff determines the request can be approved without IEC Board approval, staff shall initiate the amendment approval process. No amendment will be valid until approved by the board, except the following (with written confirmation from IEDA):

- Staff may approve a reduction in award amount and scope no more than 10% lower than original award amount, as necessary to accommodate change in pricing.
- Staff may approve extension of project completion and resulting disbursement schedule no more than one year after original schedule.

PROGRAM MANAGER

Stephanie Weisenbach
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515.348.6221

Loan Forgiveness

The board may consider requests for loan forgiveness if the borrower demonstrates forgiveness is necessary to avoid a negative material impact on the project or potential default. Any request for loan forgiveness must provide the following information:

- Circumstances that have changed since the application was approved by the board.
- Any deviation from the application with project contractors, partners, equipment, scope of work, changes in ownership, etc.
- All project invoices received and paid to date.
- Risks taken by borrower to implement the project.
- Any beneficial outcomes or lessons learned that were gained from the project.

Defaults

- At any time during the project or the repayment of the loan, IEDA may find that a borrower is in default under the terms of the loan contract. The authority will take prompt, appropriate, and aggressive debt collection action to recover any funds misspent by borrowers.
- If IEDA determines that a borrower is in default, the authority may seek recovery of the loan plus interest or other penalties, negotiate alternative payment schedules, suspend or discontinue collection efforts and take other action as the authority deems necessary.
- IEDA shall attempt to collect the amount owed. Any negotiated settlement, write-off, or discontinuance of collection efforts is subject to final review by and approval of the board.
- If IEDA refers a defaulted contract to outside counsel for debt collection, then the terms of the contract between the authority and the outside counsel regarding the scope of counsel's authorization to accept settlements shall apply.

Closeout Procedures

- Final payment from recipient in accordance with loan agreement. The loan may be prepaid in part or in full at any time without penalty.
- IEDA may request a final report upon final payment receipt.
- 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.

Key Revisions to Policies and Procedures Energy Infrastructure Revolving Loan Program

Stephanie Weisenbach, Program Manager
Iowa Energy Center Board Meeting
November 2022



EIRLP Policies and Procedures Revisions

- Minor revisions include:
 - Wording changes for clarity purposes
 - Removed some language that seemed unnecessary and had a duplicative purpose to other provisions

EIRLP Policies and Procedures Revisions

- Program funds allocated for each application cycle
 - EIRLP has quarterly application cycles
 - Up to \$10 million as funding is available
- Interest rate
 - Remain at 2%
 - Remove option for applicants to request a lower interest rate

EIRLP Policies and Procedures Revisions

- Some restrictions apply to loans over a certain size
 - Loan requests exceeding \$1 million must demonstrate broad reaching benefits for the state, local community and/or ratepayers. This will be accompanied by metrics.
 - Loan requests that exceed \$500,000 AND pledge real property as collateral will be required, if approved, to obtain a lender certificate from Iowa Title Guaranty as a condition to disbursement.

EIRLP Policies and Procedures Revisions

- Evaluation criteria (3 total)
 - Replace first criteria “demonstrates an economic impact to the local community and the state” with “demonstrates broad-reaching benefits for the state, local community, and/or ratepayers.” Projects requesting over \$1 million must meet at least that criteria.
 - Other two criteria remain the same.
 - Cash Flow and Loan Term: consider any project financial projections in the application and requested term.

EIRLP Policies and Procedures Revisions

- Conditions to Disbursement
 - Added specifics on conditions for projects pledging real property as collateral. These were mostly planned as part of the application process, but now we are formalizing them and educating applicants through this handbook. Focusing on ensuring the collateral meets or exceeds the loan request amount and will continue to hold value and provide coverage to IEDA/IEC in the event of default.

ATTACHMENT G

ACTION

REPORT
IOWA ENERGY CENTER BOARD
NOVEMBER 2022

From: IEDA Legal

Subject: Appointment of Vice Chair

Jenae Sikkink resigned her position on Iowa Energy Center Board as of September 20, 2022. Therefore, the Board needs to elect a new Vice Chair. Stuart Anderson is willing to fill the vacancy.

Proposed Motion: Appoint Stuart Anderson as Vice Chair through June 30, 2023.

Submitted By: Lisa Connell