

**Iowa Energy Center Board
Meeting Minutes May 22, 2018
9:00 a.m.**

Iowa Energy Center Board Members Present:

Robert Berntsen	David Cwiertney	Debi Durham	Stuart Anderson
Jennifer Johnson	Valerie Newhouse	Dan Nickey	Geri Huser
Joel Schmidt	Timothy Whipple	Rick Olesen	

Iowa Economic Development Authority Staff Present:

Brian Selinger	Adrienne Ricehill	Tim Waddell	MK Anderson
Amber Buckingham	Ryan Young	Kristin Hanks-Bents	Jacque Matsen
Stephanie Weisenbach	Rob Christiansen	Jennifer Klein	Terry Roberson
Kanan Kappelman			

Others Present:

Ben Noelle	Reggie Goodale	Brenda Biddle	Rod Boshart
Kelly Bradder	Emily Rice	Laura Belin	Ron Robinson
Jessica Flannery			

Welcome and Introductions

Roll Call

Board Chair called the meeting of the Iowa Energy Center Board to order at 9:01 am.

A quorum of the Board was established with the following Board members present: Stuart Anderson, Robert Berntsen, David Cwiertney, Debi Durham, Jennifer Johnson, Valerie Newhouse, Dan Nickey, Rick Olesen, Joel Schmidt, and Timothy Whipple.

Approval of March 8, 2018 Meeting Minutes

Joel Schmidt: Moved that the Board approve the March 8, 2018 meetings minutes.

Debi Durham: Seconded the motion.

Yes: 10 No: 0 Present: 0

Motion Passed

Geri Huser entered the Board Meeting after approval of meeting minutes.

Public Comment Period

No comments.

Financials / Audit – Update

Presentation provided (Attachment A)

Items of note:

- Expenses this quarter- payments made for salary, lease and office equipment for staff.

- Audit – report is set to be completed by July 2018.

- House Bill 2502 section 91 diverted IEC funding (Fee Assessment) to the general fund. The Fee Assessment funding will be diverted to the General Fund to enable the Solar Tax Credit Program to continue. Funding will be broken out as follows:
 - FY 19 Full Fee Assessment transferred to IEDA
 - FY 20 1.28 million transferred to General Fund
 - FY 21 2.9 million transferred to General Fund
 - FY 22 3.5 million transferred to General Fund

Summary of IEC Board Questions/Comments & IEDA Staff Response

- Nothing will change in the way of how the funding is collected?
 - No, this will remain the same.
- Instead of all of the money coming to IEDA a portion of it will be diverted to the General Fund?
 - Correct, this will begin in FY 20.
- What will be the remaining funding available for the Iowa Energy Center?
 - Starting FY 18, 13.5 million will be available over a span of 5 years.

Energy Legislation – Update

Items of note:

- As previously mentioned, offset created from the IEC funding to reinstate the Solar Tax Credit Program
- Senate File 2311 Energy Legislation passed this session and signed by Governor Reynolds
 - Added total resource cost test that allows IUB to assess whether energy efficiency plans are cost effective.
 - Demand Response & Energy Efficiency will become stand alone programs.
 - Energy Efficiency Program Caps: Gas 1.5%, Electric 2%.
 - Exemption mechanism within bill that allows electric utility customers to opt out if the RIM test is not over 1.0.
 - Provides preapproval process to recover costs for natural gas extensions.

Summary of IEC Board Questions/Comments & IEDA Staff Response

- How much revenue will be remaining in these programs?
 - Roughly \$60 million per year for the electric programs.

Grant Program – Update

Presentation provided (Attachment B)

Summary of IEC Board Questions/Comments & IEDA Staff Response

Pledged Commitments

- Is that the entire list of pledged Commitments?
 - Yes.

Pre-applications

- Now that you have received these pre-applications what will be the next steps?
 - During today's meeting we will select board members to serve on the grant committee. The information garnered from the pre-applications will assist the grant committee in determining program rules. Once rules have been established, the grant committee will vet these pre-applications to determine who will move onto the full application process. Selected Applicants will be invited to complete a full application.

Leveraged Commitments

- Is this money that we have currently?
 - These are the active matching grants. Previously, grant recipients were required to provide information if they had matching grants and/or any incoming funds. We have received funding commitment letters for the DOE matching grants. For funding provided by "other funds/sources" we are working with these grantees to obtain the funding commitment letters. All documentation we receive will be uploaded to lowagrants.
- Are these all of the commitments?
 - Yes, these are all of the active matching grants. It does not include the grants that have been closed out.
- When do these grants close?
 - Some of the active matching grants close in June of this year. Others close in 2021.
- Has the funding for these grants already been committed out of the current IEC funds? None of them are committed against the future revenues?
 - Correct. The monies have already been committed for the full amounts and documented in lowagrants.

- Is there any reconciliation about how many of the research projects actually result in projects in the marketplace? It's great to do the research, but how much of this has a line of sight directly to the market.
 - Moving forward, that is something that we need to take into consideration as we are developing the programs.
- We need to take a look at the research projects to determine what worked/didn't work. The concern is that we are not seeing the commercial applications to transform the marketplace. Is there not a connection between people knowing that this research is being done?
- In the past, the Board Members have asked for an executive summary detailing the results of these research projects, the market development, and whether the projects had met their criteria/objectives. This executive summary should be a basic requirement of the grantees.
- What was the previous close-out process?
 - Grantees were required to adhere to schedule and budget requirements, submit Midterm and Final Reports. As we move through these contracts and begin to receive Midterm and Final Reports we will create an executive summary for the Board. We will work with the Principal Investigators to answer any questions from the board.
- As the grants close we need to conduct a de-briefing (what happened and what are the next steps) with the Principal Investigators.
 - We can meet with the Principal Investigators to obtain this information.
- It is appropriate at the end of the grant to make sure that all of the objectives have been met. It may be difficult for some of these projects to have had immediate impact on the market and may take years of follow up funding to obtain this.
- What are the next steps and who will be following this through? Will the Universities be taking this on to help find additional funding? Do they need venture capital coming in? We do not want to lose track of the results. There may be other resources that we can put them in contact with such as IEDA or the Innovation Council.
- Do we make these expectations up front in the pre-application process?
 - This would be important to implement when new grants are issued.
- It would be important that the grant committee look at what was funded in the past to determine what worked.

Approval of City of Des Moines Contract Extension

Geri Huser: Moved that the Board approve the City of Des Moines contract extension.

Rick Olesen: Seconded the motion.

Yes: 10 No: 0 Present: 1

Motion Passed

Approval of Remaining Contract Extensions

Geri Huser: Moved that the Board approve the remaining contract extensions.

Val Newhouse: Seconded the motion.

Yes: 11 No: 0 Present: 0

Motion Passed

Alternate Energy Revolving Loan Program – Update

Presentation provided (Attachment C)

Summary of IEC Board Questions/Comments & IEDA Staff Response

Loan Terms and Amounts

- What was the longest loan?
 - Twenty years.

- Are we able to set the loan terms?
 - Yes.

Project Costs and Leveraged Funding

- Is this leverage at the beginning of the project?
 - This is leverage that is reported in the application and overall project costs. Private capital is not detailed or itemized.

- Is there any verification of the leverage?
 - No. We have received some verification of the final projects costs but not for leverage.
- Are you able to determine if any loan recipients have received tax credits?
 - No, tax credits are not covered in this report. We will have to work with our legal team to determine whether the loan recipient would have to grant permission to the Iowa Energy Center to obtain the tax credit information.
- Will you provide the names of the LLCs? Can you provide the Iowa Utilities Board this information?
 - Yes.
- The Economic Development Authority can share information to the Department of Revenue without disclosing it to outside the agency.
 - We will have to speak with our legal team to determine if we can obtain the tax credit information from the loan recipients.
- The Iowa Utilities Board would like to receive information regarding who has received tax credits that we are so that we are able to put this into provisions within our agreements.
 - We will discuss this matter with our legal team and report back our finding to the Board.

Type of Alternate Energy Production Facility

- In the last year and a half 95% of the projects were solar? Why weren't the other alternative energy resources funded at a higher level?
 - It is not clear as to why other sources were not funded.

General Questions/Comments

- The report does not include loans that were awarded from 1996-2004?
 - Correct. The report only includes the loans that have actively submitted payments and were inherited with the IEC transfer.
- Do you have documentation of those loans that have gone into default?
 - We have some documentation. ISU did have an allowance for bad debts in their reporting system. IEDA uses a historical write-off percentage over the last ten years. It appears that ISU may have done something similar. Once we receive the results from the audit we will report these finding to the Board.

- What happens if a loan recipient defaults on their loan? What are the ramifications?
 - If a loan recipient has fallen into arrears, IEDA will establish phone contact with the loan recipient for 60-90 days. Occasionally, we will work out a reduced payment plan with the loan recipient since it is better to get some payment rather than none. If this fails, we will turn the matter over to our outside collection council.
- That is the process for IEDA. What was the process of the previous Iowa Energy Center?
 - We do not have any information regarding the previous collection process.
- All of the loans are serviced through the banks. It would be the banks default procedures and collection process.
 - That is correct.
- If the bank places someone in default, then there would be no more re-payments coming back to the fund?
 - That is correct. Even though these are cooperative agreements, the banks have the first position.
- How were the past loans collateralized? Is that something that will be provided to the Board at a later date?
 - That is something that we have not been able to review. Regarding the existing and active loans, information regarding the collateral and/or promissory note is located in the agreement with the bank. In order to provide this information, we would need to gather this data and then convert all of the paper files electronically.
- Will the Board need to make the decision as to how far we go back to verify all of the loan documents?
- A decision will need to be made by the Board regarding this issue. These are closed loans and the Board needs to determine how much time needs to be spent reviewing these files.
- Were the auditors directed to look at all of the past loans?
 - They were not directed to look at the entire loan portfolio. We were only interested in having the auditors review the current active loans.
- Do the files show if a loan was closed because of default and/or payoff?
 - Within the files that we received from ISU there were roughly a dozen loans that were written off. It appears that they were never removed from their books. Once we have received the audit report we will remove these items from our receivable balance and list them as a write-off.

- Will the audit report give a complete picture of the receivables and the write-offs?
 - The audit report will help us to confirm the information is listed in Attachment A.
- It would be helpful to see some of the standard agreements between the lenders and the property owners to see the types of collateral used and ISUs position in the transaction. It will help the Board to understand the associated risk and to determine the amounts that need to be set aside for the loan program.
 - A random sampling of the active accounts will be provided to the Board.
- On the accounts receivable, how do we know what is prior to 2004?
 - The files that we received were listed in numerical order not by issue date. We were only able to look at the loan balance that we received from ISU. We are able to run a report by the closing date to determine how many loans were issued each year.
- Are you able to run a report that lists the loans by year and banking institution? Can you send the IUB this report?
 - Yes.
- Are you able to run a report that lists the loans by year and banking institution? If it doesn't require you to release any confidential information can you send a copy of this report to the IUB?
 - Yes, we will run this report and send it to you.
- Once the audit is completed, then the Board will take a vote on the write-offs and determine which loans we will be moving forward with?
 - Yes.

Administrative Rules Process

Presentation provided (Attachment D)

Summary of IEC Board Questions/Comments & IEDA Staff Response

General Questions/Comments

- The grant and loan committees should be involved in developing the new rules.
- The Board needs to review the results of the past program and revisit the seven key focus areas before developing the new grant and loan programs. The Board needs to be deliberate and not move too quickly.

- If the program rules have not been completed and approved, will we be able to release grant and loan funding?
 - The Board can work on the grant and loan program rules separately. If the Board chooses to conduct a historical investigation, to determine how to move forward with the grant program, the release of available funding will be pushed back by 1-2 months. The Board will not be able to release funding until the program rules have been completed and approved.
- I do not think it is important to conduct a historical investigation as it is more important to move forward with the grant and loan programs rules. It is important that we release funds and move projects.
- Why were the pre-applications conducted so early if we will not be able to fund projects until next spring? The pre-applications may no longer be relevant and the other funding sources could expire before we are able to issue grants. With this type of timeframe, it will appear that the Board is not moving forward and conducting work.
 - There is really no way to expedite process.
- The Board could ask for emergency rules.
 - That is not the route that we would like to pursue.
- IEDA has additional funding sources that can be accessed so that we are not losing impactful projects. We need to make sure that we are following a process that is fair, transparent and that we treat everyone equally.
 - The Energy Office will keep the Board apprised of the current projects and funding opportunities. Please let us know if there are time-sensitive projects that will not meet this timeline.
- The Board fully anticipates that the public will be involved the comment process.

Nomination of Board Subcommittees

Approval of Grant and Loan Committees

Stuart Anderson: Moved that the Board approve the formation of the Grant Committee and the Loan Committee. Five Board Members will serve on each committee.

Joel Schmidt: Seconded the motion.

Yes: 11 No: 0 Present: 0

Motion Passed

The following Board Members will serve on the Grant and Loan Committees

Grant Committee

- Jennifer Johnson
- Debi Durham
- Rick Olesen
- David Cwiertney
- Dan Nickey

Loan Committee

- Timothy Whipple
- Joel Schmidt
- Valerie Newhouse
- Stuart Anderson
- Robert Berntsen

Sponsorship Requests

Iowa Association for Energy Efficiency – Iowa Energy Summit 2018

Presentation provided (Attachment C)

Summary of IEC Board Questions/Comments & IEDA Staff Response

- What are the costs of the sponsorship? What will this provide?
 - \$5,000 for a general audience session. This will provide a 30-45 minute speaking opportunity to the entire audience of the summit. The sponsorship will also include registration for 2 individuals the use of an exhibitor booth.
- Is the Iowa Energy Center allowed to become a member?
 - Public institutions are allowed to be members. The membership includes access to webinars and online content.
- The Iowa Energy Office should become a member of IAEE.
 - The Iowa Energy Office has attended the conference and exhibited in the past. We will work with IAEE to secure membership.

- Are we allowed to have an IEC Board Meeting at the summit?
 - A meeting room can be provided for the IEC Quarterly Board Meeting. IEDA will work with IAEE to secure the date and time of the November IEC Quarterly Board Meeting.
- Has the Iowa Energy Center sponsored the summit in the past?
 - Yes.
- Is there a funding stream to allow for the sponsorship?
 - Yes.

Approval of IAEE Energy Summit 2018 Sponsorship

Geri Huser: Moved that the Board approve the IAEE 2018 Energy Summit Sponsorship.

Dan Nickey: Seconded the motion.

Yes: 11 No: 0 Present: 0

Motion Passed

Other Business

U.S. Climate Alliance

Presentation provided (Attachment F & G)

Summary of IEC Board Comments

- Representative Isenhardt had brought information before the Board regarding the request to Governor Reynolds to become a member of the U.S Climate Alliance. What is the role, if any, that the Board would like to take on regarding this subject?
- It is good that we were provided this information. If the Governor's Office decides to take action, then the Board can discuss what the appropriate collaboration would be. But I do not see the Board taking a lead role.
- Is it the Boards mission to be involved in policy? I believe that our role is to approve grants and loans.

- Previously the Iowa Energy Center had dealt with climate issues. Is that something that the Board would like to engage in? I feel that is a decision that is made beyond us. Though I think that this would be great if Iowa was involved, are we the right entity to be a part of this group?
- Since the request was sent to the Governor's Office, is the Board the right entity in state government to be pursuing this topic?
- Looking at the seven key focus areas, that the legislation placed within the statute, this political path is not within the seven pillars.
- The topics within the Iowa Energy Plan clearly relate to climate. As we develop the grants program, will it be up to the grants committee to weigh in the prioritization in how a grant addresses something like climate change? It is not mentioned in the code but it clearly the motivation of why we are running the grants program. Will that be up to the individuals in the grant committee to determine what kind of role it plays?
 - Yes, though this letter is a request for the Board to advocate for joining the alliance. In other states, the Chief Executive has made this decision. It does not speak to climate issues broadly but just to joining this Alliance. This decision is best left to the Governor's Office and the Legislature who are in a better position to consider.
- Policy is to be by the Governor's Office and the Legislature and not by this group. We follow what the law tells us as it relates to the grant applications. Energy independence is what we are striving for and we can include items within the grants that allows us to reach those goals.
- It begins to dilute what the Board is trying to accomplish. This body should really be about moving forward, making impacts, and aligning with the Energy Plan. When we start getting into policy it starts diluting our purpose and becoming controversial. This is not our purpose here.

IEC Board Vacancies – Update

- Gul Kremer (Iowa State University) has submitted an applicant to serve on the IEC Board. Awaiting approval from the Boards and Commissions Committee.
- Kelly Bradder (Simpson College) has submitted an applicant to serve on the IEC Board. Awaiting approval from the Boards and Commissions Committee.

2018 Iowa Energy Storage Committee – Update Presentation provided (Attachment F & G)

Iowa Energy Office – Update

- Through the Iowa Sister States' partnership with Kosovo, IEDA was introduced to a unique opportunity to assist the young Republic with their need to produce energy via renewable energy sources. IEDA recognized the mutually beneficial opportunity that an energy partnership could provide for Kosovo's energy needs as well as business development for Iowa's energy businesses. An IEDA representative traveled as part of an Iowa Sister States trip to Kosovo in early May to conduct exploratory conversations with key officials of the Kosovo Government to further investigate the opportunity. IEDA continues to work with representatives from Kosovo and Iowa energy businesses to help potentially bring these mutually beneficial projects to fruition.
- Next Board Meeting is August 14, 2018

Adjournment

There being no further business, the Iowa Energy Center Board adjourned the meeting at 10:45 a.m.

Adrienne Ricehill
IEC Board Administrator

Attachment A

IEDA
 Iowa Energy Center Financial Status Report
 FY2018 (Cumulative Oct 1, 2017 thru April 30,
 2018)
 IEC - Main Account

Description	Total Budget	Current Month	YTD Cumulative
<u>REVENUE:</u>			
Balance Forward from Previous FY	0	0	0
FY18 Transfer from ISU	4,321,744	0	4,322,126
FY18 Transfer from IUB	4,233,903	0	4,233,903
T.O.S. Interest	35,000	0	4,045
Other Revenue			0
			0
			0
<u>TOTAL REVENUE:</u>	8,590,647	0	8,560,074
<u>EXPENSES:</u>			
Salary & Fringe	351,675	0	60,253
Travel (In-State & Out of State)	30,000	0	105
Supplies	12,325	0	300
Telephone/Communications	6,000	0	0
Rent	10,000	0	1,200
Advertising/Marketing	30,000	0	0
I.T.	40,000	0	0
Misc.	20,000	0	10,339
ISU Grants	2,630,000		
Project Expenditures TBD dependent upon program development and finalization of rules	5,460,647	0	0
<u>TOTAL EXPENSES:</u>	8,590,647	0	72,197

IEDA
Iowa Energy Center Financial Status Report
FY2018 (Cumulative Oct 1, 2017 thru April 30,
2018)
IEC - Main Account

FUNDING AVAILABLE:	Admin	ISU Projects	New Projects	Total
<u>Revenue:</u>				
Cash Balance Forward from Previous FY (ISU)	500,000	2,630,000	1,192,126	4,322,126
FY18 Allocation	0	0	4,233,903	4,233,903
T.O.S. Interest YTD	0	0	4,045	4,045
Other Revenue YTD	0	0	0	0
Deappropriations/ Transfers	0	0	0	0
Total Revenue YTD	500,000	2,630,000	5,430,074	8,560,074
<u>Expenses</u>				
Administration YTD	(72,197)	0	0	(72,197)
Project Payouts YTD	0	0	0	0
Total Expenses YTD	(72,197)	0	0	(72,197)
<u>Obligations:</u>				
Obligations C/F	0	2,630,000	0	2,630,000
Current Year Obligations	0	0	0	0
Current Year Rescissions	0	0	0	0
Current Year Payouts	0	0	0	0
Balance of Current Year Admin	427,803	0	0	427,803
Net Obligations YTD	427,803	2,630,000	0	3,057,803
Est. Balance Available	0	0	5,430,074	5,430,074

IEDA
Iowa Energy Center Financial Status Report
FY2018 (Cumulative Oct 1, 2017 thru April 30,
2018)
IEC - Alternative Energy Revolving Loan
Program

FUNDING AVAILABLE:	Admin/Mktg	Projects	Notes Rec
Beginning Balance 10-1-17 (ISU)	0	0	12,852,838
Beginning Balance 10-1-17 (IEDA)	0	0	315,927
Transfer from ISU FY18	0	3,911,134	0
Principal Repayments YTD	0	2,420,454	(2,420,454)
T.O.S. Interest	0	3,275	0
Other Revenue			
Total	0	6,334,863	10,748,311
<hr/>			
Administration YTD	0		0
Project Payouts YTD	0		0
Total Expenses YTD	0		0
<hr/>			
<u>Obligations:</u>			
Obligations C/F	0	0	0
Current Year Obligations	0	0	0
Current Year Rescissions	0	0	0
Current Year Payouts	0	0	0
Balance of Current Year Admin	0	0	0
Current Year Write-Offs	0	0	0
Net Obligations YTD	0	0	0
<hr/>			
Est. Ending Balance YTD	0	6,334,863	10,748,311

IEDA
 Iowa Energy Center Financial Status Report
 FY2018 (Cumulative Oct 1, 2017 thru April 30,
 2018)
 IEC - Alternative Energy Revolving Loan Program

Description	Total <u>Budget</u>	Current <u>Month</u>	YTD <u>Cumulative</u>
REVENUE:			
Balance Forward from Previous FY	0	0	0
FY18 Transfer from ISU	3,911,134	0	3,911,134
Principal Repayments	3,250,000	0	2,420,454
T.O.S. Interest	35,000	0	3,275
Other Revenue			0
			0
			0
TOTAL REVENUE:	7,196,134	0	6,334,863
EXPENSES:			
Salary & Fringe	10,000	0	0
Advertising/Marketing	7,500	0	0
		0	0
		0	0
		0	0
		0	0
		0	0
		0	0
Project expenditures TBD dependent upon program development and finalization of rules	7,178,634	0	0
TOTAL EXPENSES:	7,196,134	0	0

Attachment B



Iowa Energy Center Board Meeting

May 22, 2018

IEC Grant Program Updates

- **Grant Update**
- **Pre-Application**
- **Leveraged Funds**
- **Modifications**

Grant Updates

- **Grant Contracts**

- Training completed on lowagrants.gov system.
- Ready for claims and payments once signed contracts are received.

- **Reports**

- Executive summary of Midterm/Final reports will be provided at the August board meeting.

- **Pledged Commitments**

- One moving to a formal contract.
- One closes proposals on 5/22, with funding decision on 10/1.
- One is considered closed.

Pre-Application by the Numbers

- **Numbers**

- 38 Pre-apps received

- **Institution Type**

- Regents Institution – 26
- Private College – 1
- Private Industry – 10
- Nonprofit – 1

- **High/Low**

- Lowest funding request - \$59k
- Highest funding request - \$13million

- **Focus Area**

- Biomass Conversion – 11
- Energy Workforce Development – 4
- Underserved Areas – 7
- Electric Grid Modernization – 2
- Alternative Fuel Vehicles – 5
- Technology R & D – 7
- Natural Gas Expansion – 2

- **Duration**

- Average 2-3 years

Leveraged Funds Update

Grant Name	Grant Number	Funding Agency	Funding Title	Funding to Iowa	IEC Grant Amount
Sustainable Schools	17-IEC-006	Corporation for national and Community Service	2017 Americorp State an National	\$331,476	\$27,566
In-Field Building Material Thermal Conductivity and R-Value Measurement	17-IEC-021	National Institute of Standards and Technology	NIST Measurement Science and Engineering	\$400,000	\$80,000
FaNTASTIC	17-IEC-020	National Science Foundation		\$1,000,000	\$78,106
Deoxygenation of Lignin-Derived Species to Aromatics and Olefins	17-IEC-002	BETO-DOE	Mega Bio Type FOAs	\$1,500,000	\$94,598
Autothermal Pyrolysis of Lignocellulose Wastes to Sugars and Other Biobased Products	17-IEC-015	US-DOE	Modular Chemical Process Institution	\$3,000,000	\$600,000
Electrosynthesis with High Efficiency for Renewable and Scalable Liquid-Fuel Production	17-IEC-016	ARPA-E	Refuel	\$280,000	\$7,638
Cost Effective 6.5% Silicon Steel Laminate for Electric Machines	17-IEC-013	DOE, EERE, VTO	2016 Vehicle Technologies Program	\$2,800,000	\$55,535
Development of Ag Based Phase change Materials for Building Applications	17-IEC-019	DOE and NSF		\$1,200,000	\$142,136
Resilience Enhancement of Electric Power Systems and Associated Infrastructure	17-IEC-007	CSF	CRISP Type 2	\$2,500,000	\$124,508
Developing a Landscape of Building Energy Use for Des Moines	17-IEC-018	White House	Smart Cities Initiative	\$800,000	\$98,557
Measurement Based Hierarchical Framework for Time-Varying Stochastic Load Modeling	17-IEC-012	DOE	Grid Modernization Lab Call	\$450,000	\$30,071
Hydroxycinnamic Acids from Lignin as Platform Molecules for Productions of Bio-based Materials	17-IEC-004	USDA	USDA-NIFA Biomass R & D	\$2,000,000	\$149,211
Flexible Service Contracting for Risk Management within Integrated Transmission and Distribution Systems	17-IEC-014	DOE	Addressing Risk and Uncertainty in the Future	\$345,360	\$21,688
Batteries: Strong High Li Ion Conductivity Li-Impermeable ThinRibbon Glassy Solid Electrolytes	17-IEC-001	ARPA-E		\$2,500,000	\$287,250
Manufacturing of Advanced Alnico Magnets for Energy Efficient Traction Drive Motors and Generators	17-IEC-010	DOE	Technology Commercialization Fund	\$325,000	\$65,000
			Total	\$19,431,836	\$1,861,864

Action Item: Grant Modification Request

- Extension for contracts that expired between the transfer to IEDA and receipt of signed contracts. IEDA staff recommends a new expiration date of 7/31/2018.

IEDA Contract No.	PI	Organization	Title	Awarded	Expenses to Date	Awarded Unspent Balance	Start Date	End Date
17-IEC-024	Atul Kelkar	Iowa State University	Municipal and Hydrocarbon Waste Streams - Alt Source for Fuels	153,070	106,491.78	46,578.22	Prior Years	6/30/2017
17-IEC-022	Sharma, Anupam	Iowa State University	Organizing the 2017 North American Wind Energy Academy Symposium at ISU	14,916	5,115.34	9,800.66	1/15/2017	10/30/2017
17-IEC-009	Fett, Will	Iowa Ag Literary Foundation	My Family's Wind Farm	20,273	7,443.00	12,830.00	3/1/2017	2/28/2018
17-IEC-019	Shafei, Behrouz	Iowa State University	Development of Agricultural-Based Phase Change Materials for Building Applications	142,136	94,202.99	47,933.01	7/25/2016	1/25/2018
17-IEC-018	Zhou, Yuyu	Iowa State University	Developing a Landscape of Building Energy Use and Emissions in the City of Des Moines, IA	98,557	84,366.83	14,190.17	7/15/2016	12/15/2017
17-IEC-007	Alipour, Alice	Iowa State University	Resilience Enhancement of Electric Power Systems and Associated Infrastructures	124,508	121,854.14	2,653.86	10/1/2016	9/30/2017
17-IEC-020	Takle, Eugene	Iowa State University	Forced and Natural Turbulence Allowing Studies of Turbulent anisotropic Conditions (FaNTASTIC)	78,106	55,223.27	22,882.73	11/1/2016	12/31/2017
17-IEC-021	Wang, Xinwei	Iowa State University	In-Field Building Material Thermal Conductivity and R-Value Measurement	80,000	34,969.59	45,030.41	2/15/2017	2/14/2018

Attachment C

AERLP

Portfolio Summary Report

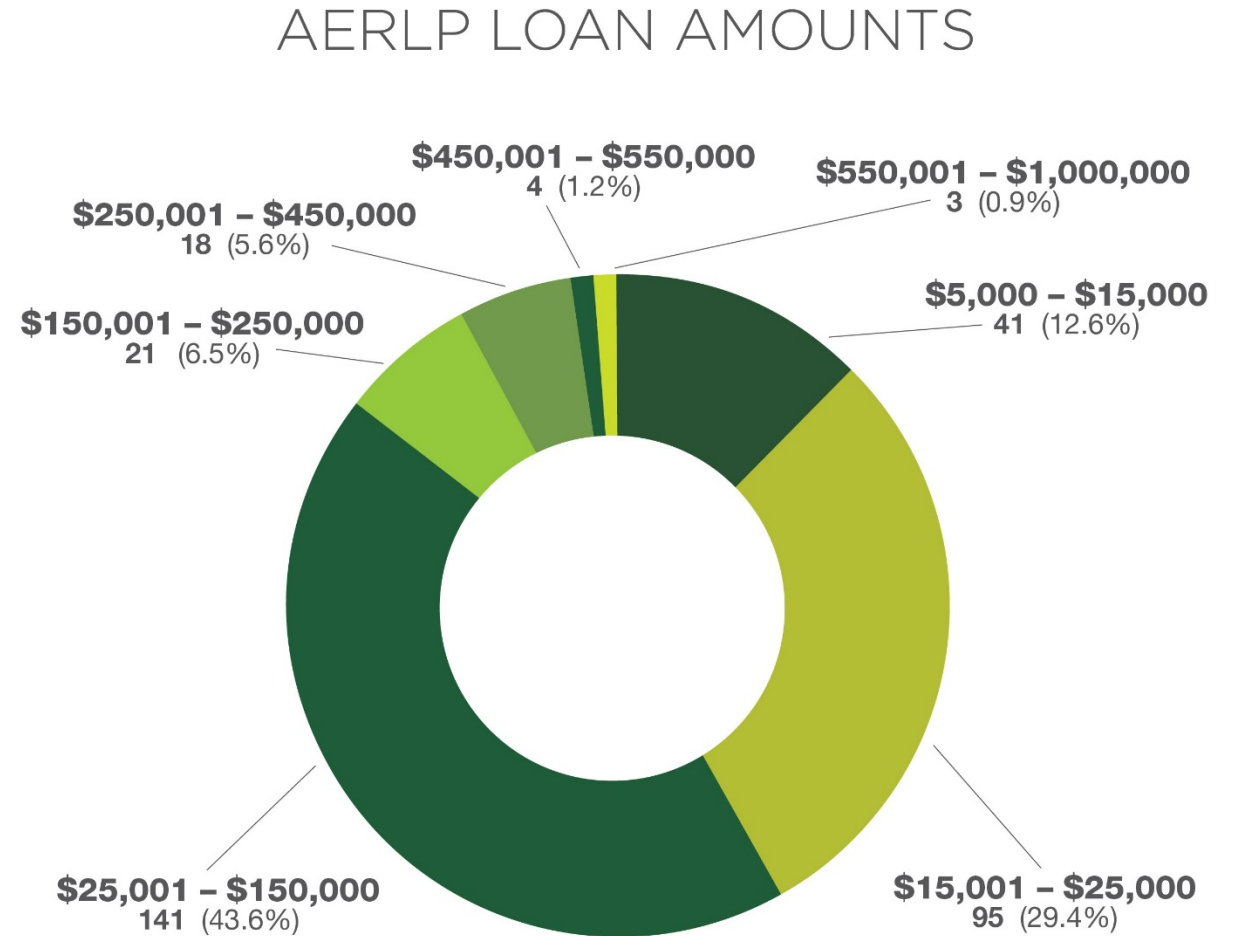
Stephanie Weisenbach, Project Manager

Scope of Report

- **Includes 323 open and active loans inherited by IEDA**
 - Loans executed from May 2004 to June 2017
 - Provides some comparison to loans issued in the most recent 1.5 years of portfolio
- **Does not include historical portfolio since AERLP began**
- **Summary covers:**
 - Loan terms and amounts
 - Project costs and leveraged funding
 - Type of Alternate Energy Production (AEP) facilities
 - Type of locations
 - Geographic concentration

Loan Terms and Amounts

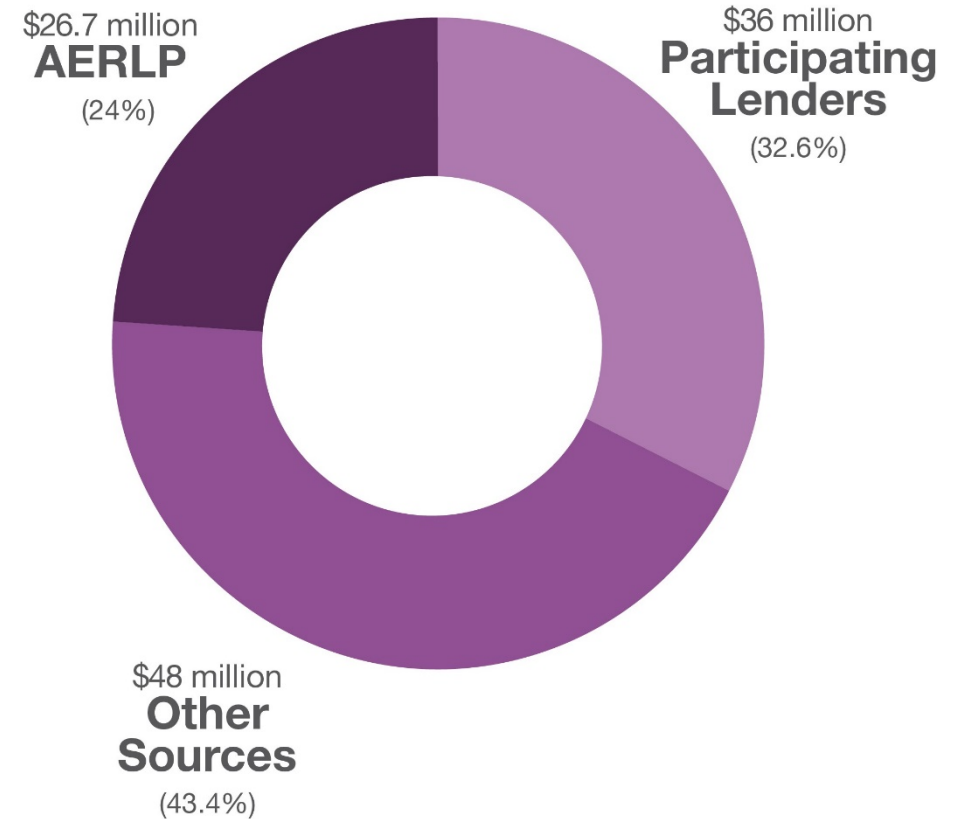
- Average Loan Term: 8.1 years
- Average Loan Amount: \$82,737



Project Costs and Leveraged Funding

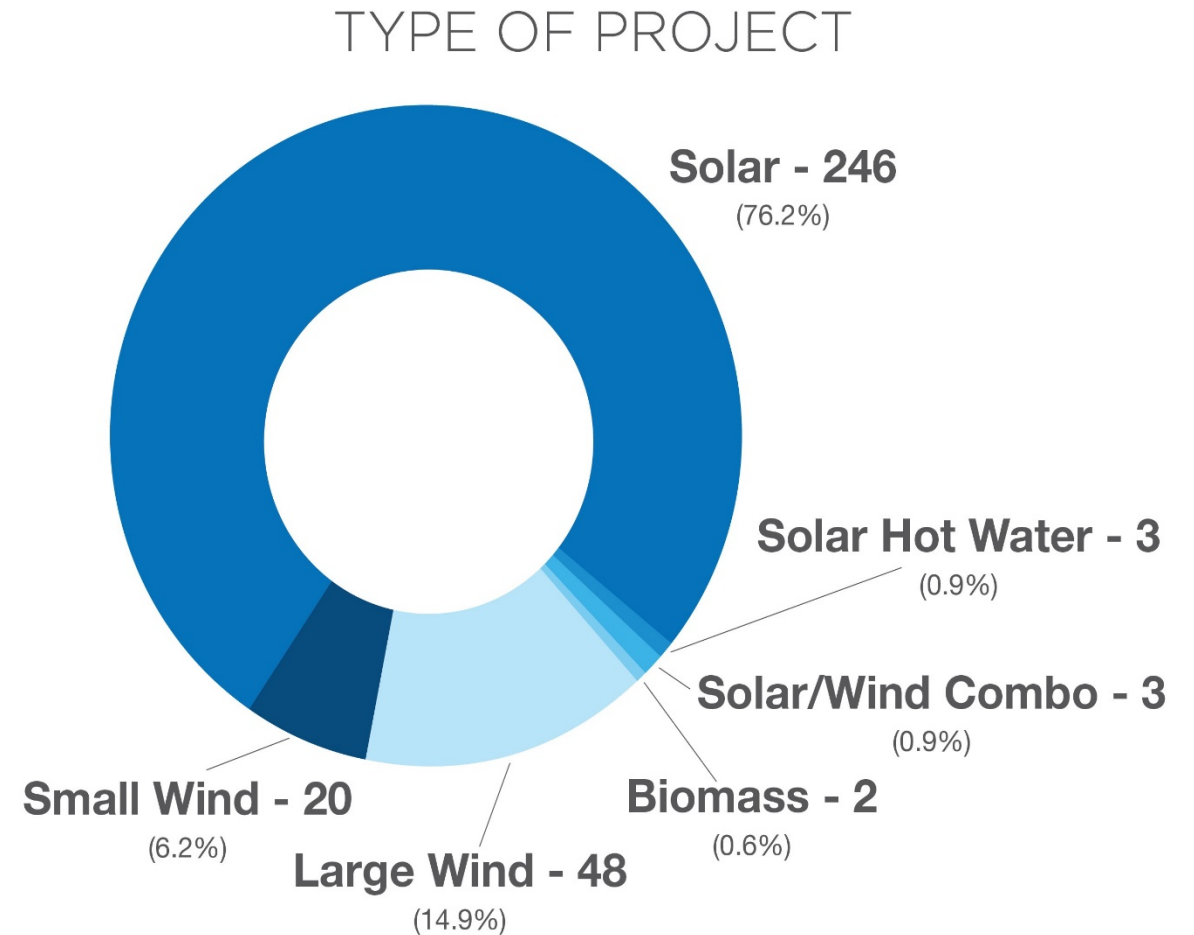
- Average leverage: 56.7%
- Some of the highest project costs had the highest leverage
- Other sources included private Investment and USDA REAP

LEVERAGE



Type of Alternate Energy Production Facility

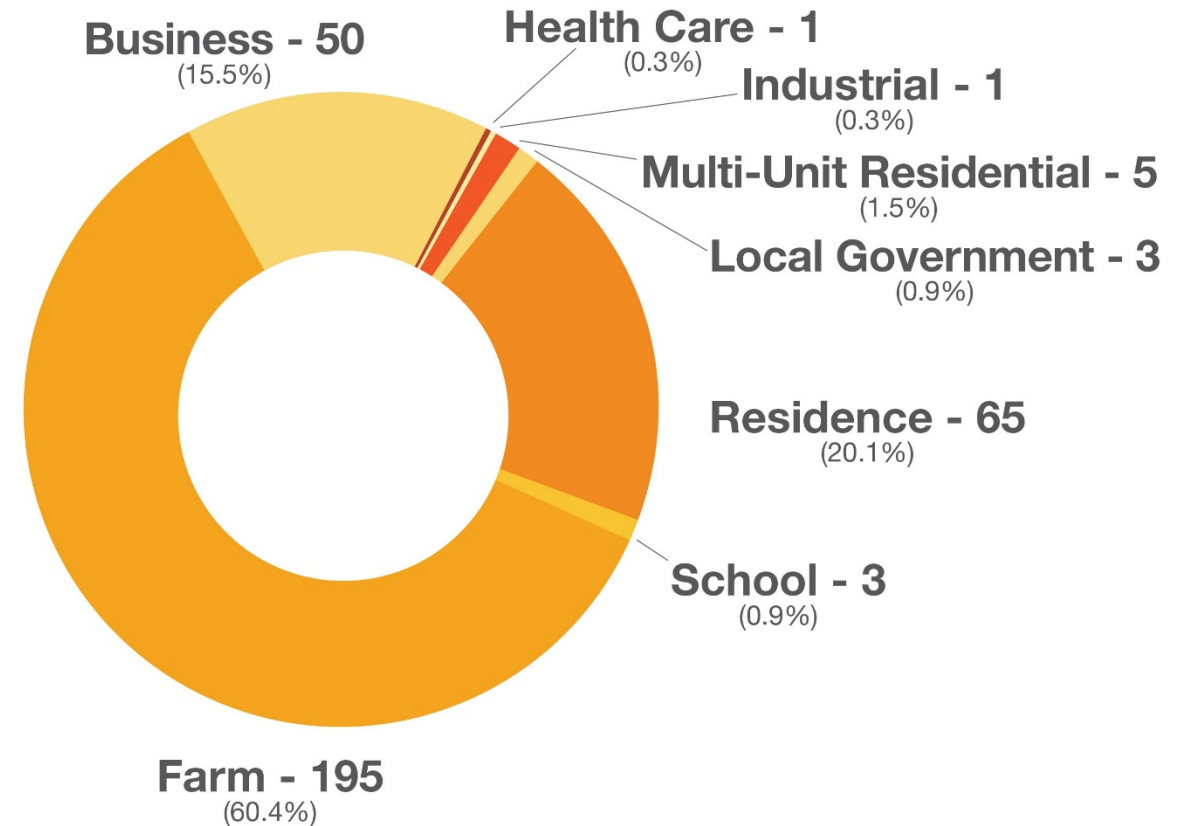
- Majority of projects are solar
- Small wind: >20kW
- Large wind: <20kW
- Biomass: one anaerobic digester and one wood fired boiler



Type of Location

- Site location
- Not always the same as applicant type or end user

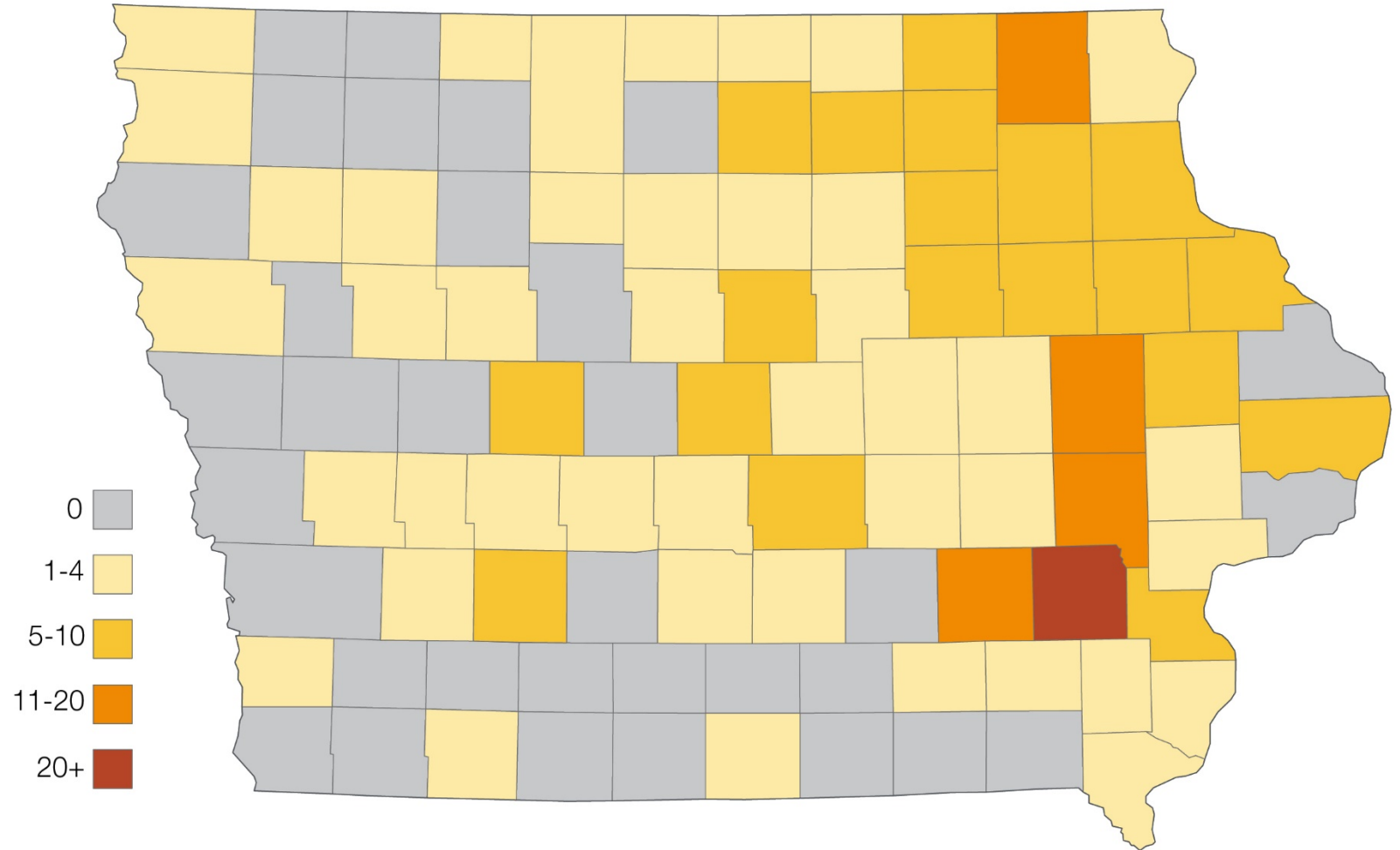
TYPE OF LOCATION



Geographic Concentration of Projects

- **Highest: 55**
 - Washington
- **Next Highest: 11-20**
 - Winneshiek
 - Johnson
 - Keokuk
 - Linn

NUMBER OF LOANS BY COUNTY



Attachment D

Proposal for Iowa Energy Center Administrative Rules Process

Action	Responsible Party	Estimated Timeframe
Loan and Grant Committees appointed by IEC Board	IEC Board	May IEC Board meeting
Program proposals submitted to committees	IEDA energy staff	2 weeks after May IEC Board meeting
Review and further development of program proposals	Loan and Grant Committees	4 weeks
Recommended program proposals submitted to IEC Board	IEDA energy staff	1 week before IEC Board meeting
Issue notice of public meeting to share draft administrative rules	IEDA energy and communications staff	4-6 weeks prior to public meeting
Approval of program proposals	IEC Board	Proposed July IEC Board meeting
Draft administrative rules developed based on IEC board- approved program proposals	IEDA legal staff	Minimum 4 weeks
Internal review of 1 st draft administrative rules	IEDA energy and management staff	1-2 weeks
Draft administrative rules shared with IEC Board or relevant committee (need decision from Board)	IEDA legal staff	1-2 weeks before public meeting
Public meeting on draft administrative rules	IEDA staff, IEC Board, stakeholders and interested members of the public	2 weeks before IEC Board meeting
Committees meet to review feedback from public meeting	Loan and Grant Committees	Within 1 week after public meeting
Make any revisions based on public feedback and committee response	IEDA legal staff	1-2 weeks after public meeting
Administrative rules/Notice of Intended Action submitted to IEC board for review prior to meeting	IEDA energy staff	Within 1 week before IEC Board meeting
IEC Board votes on approval of NOIA	IEC Board	IEC Board meeting
Rules filed with Administrative Code Editors Office	IEDA legal staff	1-2 business days after adoption/ NOIA
NOIA published	IEDA legal staff	2.5 weeks after submission deadline
Public comment period	IEDA staff	20 days after publication
Make any revisions to administrative rules. Review by Administrative Rules Review Committee (ARRC)	IEDA legal staff	1-2 weeks after public comment period closes
IEC adoption of rules and filing	IEC Board and legal staff	
Possible 2 nd review by ARRC	ARRC	
Publication of adopted rules	IEDA legal staff	2.5 weeks after submission deadline
Effective Date		35 days after publication of adopted rules

Attachment E

Iowa Energy Summit					
Sponsored by the Iowa Association for Energy Efficiency (IAEE)					
Wednesday, November 7, 2018					
Workshop	11:30	4:00	Tentative B3 Benchmarking Learning Lab (pre-registration is required) - Skinner B Hosted by the Iowa Economic Development Authority		
Workshop	12:50	4:00	Emerging Energy Professionals - Skinner A		
Tour	4:15	5:00	Tour of Prairie Meadows - Meet at IAEE booth across from registration table		
Annual Meeting	5:00	5:30	Join the IAEE Board for the annual meeting. Everyone welcome. Door prizes - Skinner C		
Reception	5:30	7:00	Meet exhibitors, visit with poster presenters, and network with colleagues in the Exhibit Hall		
Poster Presenters					
Thursday, November 8, 2018					
Schedule	Start	End	Skinner A	Skinner B	Skinner C
Registration & Breakfast	7:30	8:00	Registration and Continental Breakfast - Exhibit Hall		
Intro and Welcome	8:00	8:15	Welcome from Iowa Association for Energy Efficiency - Bishop A & B		
Keynote	8:15	9:05	John Tooley		
Break	9:05	9:25	Networking Break - Visit exhibitors and poster presenters		
Session 1	9:25	10:15			
Session 2	10:20	11:10			
Lunch	11:15	12:15	Lunch - Bishop A & B		
	12:15	12:35	2nd Keynote		
Session 3	12:45	1:35			
Session 4	1:40	2:30			
Break	2:30	3:00	Networking Break - Visit exhibitors and poster presenters		
Session 5	3:00	3:50			
Conference Adjourned					

Companies Represented at 2017 Iowa Energy Summit

Alliant Energy	East Central Iowa REC	Muscatine Power and Water
A-TEC Energy	Energy Association of Iowa Schools	Nationwide Mutual Insurance
Black Hills Energy	The Energy Group	Nexant, Inc.
Butler County REC	Energy Masters ESI	Office of Consumer Advocate
Casey's General Stores	ESI	Oldcastle Inc
Cedar Falls Utilities	Franklin Energy Group	OPPD
Cedar Rapids Community School District	GDS Associates, Inc.	Residential Science Resources
Center for Energy and Environment	Green Iowa AmeriCorps	Resource Action Programs
Chariton Valley Electric Cooperative	Harlan Municipal Utilities	Seventhwave
CIPCO	Indian Hills Community College	Trees Forever
City of Cresco	Innovative Facilities Solutions	U.S. Green Building Council - Iowa
City of Des Moines	Innovative Lighting LLC	UNI AmeriCorps
City of Independence	Iowa Association of Electric Cooperatives	UNI Center for Energy and Environmental Education
City of Maharishi Vedic City	Iowa Economic Development Authority	University of Iowa
City of Storm Lake	Iowa Finance Authority	University of Northern Iowa
CLEARresult	Iowa Governor's STEM Advisory Council	University of Northern Iowa - AmeriCorps
Control Installations of Iowa (CI3)	ISU Extension and Outreach	The Waldinger Corporation
Corn Belt Power Cooperative	Linn County REC	The Weidt Group
C-Wise Design and Consulting LLC	MEEA	WECC
Des Moines Public Schools DNVGL	Michaels Energy	
DNVGL	MidAmerican Energy	*2018 Companies*
DPO Construction, L.C.	Midwest Energy Efficiency Alliance	

Iowa Energy Summit - STATS

Category	2004	2005	2006	2007	2008
	October 27, 2004	October 6, 2005	October 25, 2006	October 4, 2007	October 28, 2008
	Holiday Inn - Des Moines	Holiday Inn - Des Moines	Holiday Inn - Des Moines	Holiday Inn - Des Moines	Holiday Inn - Des Moines
Attendees	74	89	101	113	137
Exhibitors	10	15	17	17	19
New Sponsors					
New Members					
Reception	Unknown	Unknown	Unknown	Unknown	Unknown

Category	2009	2010	2011	2012	2013
	September 22, 2009	October 12, 2010	October 18, 2011	November 7-8, 2012	November 4-5, 2013
	Gateway - Ames	Gateway - Ames	Gateway - Ames	Embassy - Des Moines	Prairie Meadows - Altoona
Attendees	187	237	156	179	238
Exhibitors	22	20	19	16	19
New Sponsors	NA	1	1	2	1
New Members	NA	24	9	58	35
Reception	Unknown	Unknown	56	75	123

Category	2014	2015	2016	2017	2018
	September 24-25, 2014	November 3-4, 2015	October 25-26, 2016	October 3-4, 2017	
	Prairie Meadows - Altoona	Prairie Meadows - Altoona	Prairie Meadows - Altoona	Prairie Meadows - Altoona	
Attendees	230	207	192	213	
Exhibitors	24	25	22	21	
New Members	25	24	39	42	
Reception	Unknown	131	147	150	
Attended - IAEE Members & sponsors		109	109	140	
Attended - Non-members		98	90	73	
Attended - Commercial		61	75	57	
Attended - Gov/non-profit		39	27	25	
Attended - Iowa Energy Center		21	19	-	
Attended - Speakers		18	16	20	
Attended - Students		28	18	13	
Reception Only			5	8	
Workshop			29	22	

Attachment F

UNITED STATES CLIMATE ALLIANCE

9 February 2018

The Honorable Charles Isenhart State Representative
Iowa House of Representatives Statehouse Des Moines, Iowa 50319

Dear Representative Isenhart,

Thank you for your recent correspondence regarding the opportunity to consult with the Iowa Innovation Council, Iowa Innovation Corporation, Economic Development Authority and Iowa Energy Center, as well as other stakeholders, regarding Iowa's potential participation in the U.S. Climate Alliance. I would be glad to accept your kind invitation to visit Iowa to share the work of the Alliance and explore how cooperation with Alliance States can help Iowa achieve its clean energy and climate priorities. I also would like to extend my personal thanks for your leadership and dedication to mobilizing support in the state for ambitious climate action.

As I read the Iowa Energy Plan, it is clear that many of the state's energy priorities align with the priorities of the Alliance - a focus on innovation, workforce development, modernizing our electrical grids and promoting the expansion of electric vehicles. Furthermore, Iowa's long history of leadership in clean energy, in particular the successful deployment of wind power at scale, makes its membership in the U.S. Climate Alliance both logical and valuable.

As you know, the U.S. Climate Alliance is a bipartisan coalition of states committed to continuing American leadership in the essential mission of combatting global climate change. The Alliance consists of 16 American states and territories represented by both Democratic and Republican governors who have committed their jurisdictions to meeting or exceeding their share of the carbon pollution reduction goals put forward by the United States in the historic 2015 Paris Agreement. These states are also committed to working together to accelerate emissions reductions, capture the economic opportunities in clean energy, and to share the stories of their states' successes with the American and global community.

The member states and territories of the Alliance together make up over one-third of the population of the United States, and their economies collectively comprise over \$7.4 trillion - equal in economic terms to the third largest country in the world. In the last decade or so, the Alliance states' have on average experienced faster economic growth than the rest of the U.S. economy while also reducing emissions at a faster pace. Their climate and clean energy policies have helped create 1.5 million clean energy jobs -more than half the U.S. total. The Alliance State have demonstrated that the solutions to today's climate and energy challenges can not only help stave off the worst impacts of climate change, but help grow economies and create American jobs.

The Honorable Charles Isenhart 09 February 2018
Page 2

The State of Iowa, which has demonstrated its own success expanding clean energy, has much to offer other states, and the world, in its participation in the group, as well as a chance to take advantage of new opportunities in technology deployment and emissions reductions. In becoming a member of the U.S. Climate Alliance, Iowa could join its fellow states in building a more prosperous, sustainable and secure clean energy future for the United States.

Thank you again for contacting me, and your continued interest in the U.S. Climate Alliance. I look forward to an opportunity to speak with you and your colleagues further.

Sincerely,

A handwritten signature in cursive script that reads "Julie Cerqueira".

Julie Cerqueira
U.S. Climate Alliance Executive Director

Attachment G



House of Representatives
State of Iowa
Eighty-Seventh General Assembly
STATEHOUSE
Des Moines, Iowa 50319
September 1, 2017
World Day of Prayer for the Care of Creation

Governor Kim Reynolds
Iowa State Capitol
1007 E. Grand Avenue
Des Moines, IA 50319

Dear Governor Reynolds:

We urge you to take executive action to join the State of Iowa to the United States Climate Alliance.

As you know, the Climate Alliance is an association of states committed to carrying out the intent of the Paris Agreement. The Paris Agreement builds upon the United Nations Framework Convention on Climate Change and recruits governments to the common cause of ambitiously combatting climate change by limiting global temperature increases, by dealing with climate impacts and by adapting to its effects.

We believe that Iowa's participation in the Climate Alliance is consistent with the recently-approved Iowa Energy Plan, which aspires to "collaborate locally, grow sustainably and lead nationally."

You capably chaired the development of the Energy Plan and asserted in your message that "the time is now to continue to build on Iowa's successes by charting a sustainable and predictable course for tomorrow."

This past legislative session, the General Assembly and Governor Branstad approved legislation moving the Iowa Energy Center to the Iowa Economic Development Authority, strengthening the capacity of state government to implement the Energy Plan and provide that national leadership.

The Economic Development Authority's City Energy Management Program works with participating communities to create energy action plans, establish the business case to invest in energy efficiency and develop a steady source of funding for energy efficiency projects.

The Iowa Utilities Board and Office of Consumer Advocate have maintained an ongoing Energy Efficiency Collaborative, and the Board has opened an inquiry into the potential for widespread use of distributed energy resources in Iowa.

Iowa's public universities, led by Dr. Robert Brown, is completing a five-year project funded by the National Science Foundation to build Iowa's research capacity in sustainable energy systems. The project supported studies in bioenergy, wind energy, energy utilization and energy policy, including partnerships with the state's community colleges, private colleges, school districts, government agencies and industries.

Dr. Brown also leads Iowa State University's Bioeconomy Institute, which supports Iowa agriculture in the state's quest for sustainable sources of fuel, energy, chemicals, and material, such as biochar. Iowa's researchers are part of a "New Carbon Economy" consortium launched by the Center for Carbon Removal, a partnership of research institutions. The goal of the initiative is to remove carbon dioxide from the atmosphere and convert it into valuable products and services.

The Iowa Department of Natural Resources has successfully led an interagency, public-private stakeholder group to coordinate development of efforts to reduce carbon emissions in Iowa, and regionally, in accordance with the Clean Power Plan. That stakeholder group could be charged with continuing their work and lead Iowa's participation in the multi-state Climate Alliance.

In your letter introducing the Iowa Energy Plan, you concluded that "the Governor's office looks forward to working with Iowa's stakeholders on strategy implementation."

As elected officials representing legislative districts where we can convene constituents to "collaborate locally," we are eager to partner with you to make the Iowa Energy Plan a reality and help Iowa do our part to achieve the goals of the Paris Agreement.

We can do this!

We respectfully suggest that our collective intent can be expressed and Iowa's rightful place among states committed to climate action can be claimed by your Executive Order committing Iowa to the United States Climate Alliance.

Thank you for your attention and consideration. Best wishes for your tenure as our governor, working with the General Assembly to pursue the public interest and achieve the common good.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chuck Isenhart".

State Representative Chuck Isenhart
Ranking member, Environmental Protection Committee

State Representative Sharon Steckman
Environmental Protection Committee
Ranking member, Education Committee

State Representative Cindy Winckler
Environmental Protection Committee
Ranking member, Education Appropriations Subcommittee

State Representative Marti Anderson
Environmental Protection Committee
Ranking member, Public Safety Committee

State Representative Vicki Lensing
Environmental Protection Committee

State Representative Ako Abdul-Samad
Environmental Protection Committee

Representative Bob Kressig
Environmental Protection Committee

State Representative Monica Kurth
Environmental Protection Committee

State Representative Mark Smith
Minority Leader

Representative Bruce Bearinger
Assistant Minority Leader
Member, Natural Resources Committee, Economic Growth Committee and Agriculture Committee

State Representative Liz Bennett
Assistant minority leader
Member, Economic Growth Committee and Governor's STEM Advisory Council

State Representative Brian Meyer
Assistant minority leader
Member, Commerce Committee and Local Government Committee

State Representative John Forbes
Ranking member, Transportation Committee

State Representative Todd Prichard
Ranking member, Agriculture Committee

State Representative Jo Oldson
Ranking member, Commerce Committee

State Representative David Jacoby
Ranking member, Ways and Means Committee

State Representative Art Staed
Ranking member, Local Government Committee

State Representative Mary Mascher
Ranking member, State Government Committee

State Representative Mary Gaskill
Ranking member, Economic Growth Committee

State Representative Jerry Kearns
Ranking member, Veterans Affairs Committee

State Representative Beth WesseI-Kroeschell
Ranking member, Human Resources Committee

State Representative Lisa Heddens
Ranking member, Health and Human Resources Appropriations Subcommittee

State Representative Abby Finkenauer
Ranking member, Government Oversight Committee

State Representative Timi Brown-Powers
Member, Iowa Commission on Interstate Cooperation and Governmental Public Health Advisory Council

State Representative Wes Breckenridge
Member, Natural Resources Committee and Public Safety Committee

State Representative Amy Nielsen
Member, Transportation, Infrastructure, and Capitals Appropriations Subcommittee

State Representative Charlie McConkey
Member, Commerce Committee and Economic Growth Committee

State Representative Tim Kacena
Member, Public Safety Committee

State Representative Ras Smith
Member, Transportation Committee and Transportation, Infrastructure and Capitals Appropriations Subcommittee

Attachment H

2018 Iowa Energy Storage Committee

Goal:

IEDA to convene a diverse group of energy stakeholders to gather input and recommendations on how Iowa could embrace this emerging technology to further harness and complement the state's existing renewable energy resources. Based upon stakeholder feedback, IEDA will develop an action plan which will be utilized as a blueprint for the state to realize the benefits of advancing applications of this emerging technology.

Timeline:

First committee meeting to be held in early June, followed by the second meeting in August and third / final meeting in October. An action plan will be completed and made publicly available by the end of 2018.

Organizations (18)	Confirmed Member
Alliant Energy (IPL)	Joe McGovern
Iowa Assoc. of Business & Industry (ABI)	Nicole Crain
Iowa Assoc. of Electric Cooperatives Municipal Utilities (IAMU)	Regi Goodale
Iowa Assoc. of Municipal Utilities	Gage Huston
Iowa Dept. of Transportation (DOT)	Angela Poole
Iowa Environmental Council	Kerri Johannsen
Iowa National Guard	Ken Thornton
Iowa Solar Representative (Ideal Energy)	Troy Van Beek
Iowa State University (ISU)	Anne Kimber
Iowa Utilities Board (IUB)	Brenda Biddle
Iowa Wind Representative (Iowa Wind Energy Association)	John Boorman
ITC Midwest	Mike Dabney
Labor Representative - Nelson Electric (International Brotherhood of Electrical Workers (IBEW)/National Electrical Contractors Association (NECA)	Stan Pfoff
MidAmerican Energy Company (MEC)	Neil Hammer
Midcontinent Independent System Operator (MISO)	Alison Archer
NextEra	Soria Talbot
University of Iowa (U of I)	Syed Mubeen
University of Northern Iowa (UNI)	Dan Nickey