

Iowa Power Fund Board - Due Diligence Committee (DDC)
Meeting Minutes
June 24, 2009

Iowa Department of Economic Development
Conference Room
Des Moines, IA

Call to Order

Brian Crowe, Program Planner, called the meeting to order at 12:15p.m.

Roll Call

Member	Present	Absent
Franklin Codel		X
Ted Crosbie		X
Vern Gebhart	X	
Patricia Higby	X	
Fred Hubbell	X	
William (Curt) Hunter	Conf. Call	
Kevin Nordmeyer	X	
Roya Stanley	Conf. Call	

Also in attendance from the Office of Energy Independence: Mary Lewis.

Approval of Agenda

Mr. Crowe asked for a motion to approve the agenda. Mr. Hubbell made the motion to approve; Mr. Gebhart seconded the motion. The motion passed unanimously.

Approval of Minutes

Mr. Crowe asked for a motion to accept the April 22nd minutes. Mr. Gebhart made a motion to approve; Mr. Hubbell seconded the motion. The motion passed unanimously.

Mr. Crowe then asked for a motion to accept the May 4th minutes. Ms. Higby noted that she had joined the call late and asked that the minutes be corrected to reflect her attendance. Ms. Lewis made a note of that correction. Mr. Hubbell made a motion to approve the minutes with Ms. Higby's correction; Ms. Higby seconded the motion. The motion passed unanimously.

Chair's Remarks

None

Full-Application Review

09-04-1183 Amaizing Pioneer Biomass Project, Amaizing Energy LLC (AEL), Denison, IA
Requesting \$2,500,000 Match \$12,650,000

Amaizing Energy proposes to construct a pilot scale advanced biofuels reactor and biomass processing system. This project uses proprietary technology that has been demonstrated by Pioneer Astronautics in a laboratory bench scale setting. The process uses methanol from biomass and ethanol to produce butanol. This project will allow for the assessment of equipment and component systems as "bolt-on" technology for existing ethanol plants. This project will provide existing ethanol plants the opportunity to utilize biomass inputs and produce for the new advanced biofuels market as called for by the national renewable fuel standards (RFS).

Q: How does the biomass portion deliver twice as much volume?

A: Based on methane gas from landfills and resources available. Basically works with anything that uses carbons.

Q: With conversion efficiencies the biomass still gets the price down to be competitive?

A: That's what this pilot project wants to prove.

Q: What about storage/transportation of product?

A: That's why we want to bring in Iowa State University and their rich history and knowledge of biomass.

Q: How much butanol is currently being blended at pumps now and what are those regulations?

A: We're not aware that butanol is being used commercially except as a fuel additive. It is something that is used industrially.

Q: In your argument you said that it will help you get past that blend wall – won't you need legislation?

A: We have great support from Department of Energy's Secretary Chu and are sure we have support from the corn base.

Q: What's the timing of the DOE grant?

A: In the last three weeks we have seen potential problems with the competitive nature of the grant. We're not sure corn ethanol would meet their biomass requirement. USDA has grants that help those projects that don't quite fit DOE requirements. The USDA grant is due in about 30 days.

Q: Say there's intellectual property with your project. You don't address how you would share your success with the Iowa Power Fund.

A: Wasn't aware this is a hard requirement. We wanted to include a half percent of profits for green loans to minority and women owned green businesses and to educate other ethanol refineries.

Q: We want to invest state money in projects that will benefit everyone in the state.

A: We weren't aware but will adjust if it's a requirement.

Q: You've informed us of DNR citations. If are there any outstanding issues, the Iowa Power Fund Board wouldn't look favorably on your project.

A: To the best of our knowledge, we have taken care of all of the DNR's citations.

Q: \$1.25 million is the set-up money contingent of the \$10 million from DOE?

A: Correct.

Q: But you'd be able to work around that?

A: Yes. We feel that we'll be more successful with the unsolicited application.

Q: You've done a bench and now want to do a pilot. How much of that existing plant will you use?

A: We have to use a different plant but will use 18% methane and 82% ethanol in the formula totalling one ton of biomass a day per DOE requirements. Intend to use everything that's produced in the pilot.

Q: Have you had a capitol call?

A: No. Our lenders haven't felt that it's been needed.

Mr. Hubbell suggested that OEI Staff could write a comfort letter. The Department of Energy would run the project through a heavy technical review process.

Q: Can this be changed from corn?

A: Currently its corn but it could transfer to something else depending on market trends and availability.

Vote:

Yes – Higby, Hubbell, Nordmeyer, Gebhart – full application to IPF Board should emphasize on impact the project has on the environment and address the IP issues of the project.

Table –

No –

09-04-1193 Growth Design Biofuels – McGyan Process Commercialization
Growth Design Corporation, Forest City, IA
Requesting \$4,000,000 Match \$3,754,440

Growth Design Biofuels proposes to bring the McGyan Process, a new biodiesel processing technology, to the north central Iowa commercial market to boost the agricultural and sustainable energy economies. The project will create jobs and revitalize biodiesel production. This is a next generation biodiesel refining process that will reduce the environmental impact by reducing emissions and byproducts of current biodiesel production. The process does not generate soap byproducts or give off

emissions because it doesn't consume water. Also, the new process offers the biodiesel industry greater flexibility in the feedstock variety used in production.

Q: You don't plan to apply for DOE money?

A: We thought that this was a more focused source at this time but plan to apply at a later date for another section of the project.

Q: The Power Fund doesn't fund "bricks and mortar".

A: The money would go for the technology.

Q: What is your cost for the pennycress?

A: Feedstock is going for 16 cents per pound and we don't see it fluxing much.

Q: What is the relationship of the technology team?

A: It's a license arrangement. McNeff would be consulting but we're buying the technology.

Q: So if it's successful, how will you replicate the project?

A: We would partner with nonprofit clients that would buy into the technology. It would be a turn-key business. Existing biorefineries could incorporate this technology.

Q: Have you licensed to others besides Growth Design?

A: Not in Iowa. We have in Illinois.

Q: Where does this fit?

A: This would be an early stage commercialization for biofuels, at a \$2 million cap.

Q: How is this not like an Arby's or McDonald's franchise when you have to buy/sell license agreements within a 25 mile radius of one another?

A: No other full commercial plants are currently operating.

Q: It's not clear that we'd be starting or strengthening something for Iowa as proposed.

A: We believe that we'll be the first plant that's fully functional, other than the pilot plant in Minnesota.

Q: Have you been to DED and talked to them about their resources?

A: No.

A very small piece could be applicable for the Power Fund but DED seems more suitable.

Vote:

Yes –

Table – Gebhart – supports going to DED, **Higby, Hubbell** - ask that Growth Design talk to DED and other sources and then we could have another look at the project, **Nordmeyer, Hunter**

No –

09-04-1178 Trees Forever Recover, Replant, Restore: Post-Disaster Plantings for Energy Efficiency, Trees Forever, Inc., Marion, IA
Requesting \$391,600 Match \$341,720

Recusal: Gebhart

Trees Forever proposes to work with 10 Iowa communities that were impacted by the natural disasters of 2008. The project is to develop long-term, sustainable tree planting programs that focus on maximizing energy savings, carbon sequestration, and other economic and environmental benefits. The project proposes to engage residents, business owners, volunteers, students, and city leaders in the selected communities to replant, enhance and maintain their urban tree canopy. Project leaders would focus on best management practices for maximizing energy and environmental benefits. Also, project leaders plan to disburse widespread marketing and communications efforts to reach a larger audience.

Q: Did you say that you've taken funds from other projects to increase the match?

A: No, we'll be using labor that we had already intended to have for some of the communities. That figure wasn't in the original proposal.

Q: You state that you have \$200,000 from utility supporters. Is there new cash?

A: To some degree, yes, because we're going to disaster communities and we will be receiving money from relief funds.

Q: Would this project be working with the ten communities without Power Fund money?

A: Yes but the education piece would help us ratchet up to a whole other level.

Q: Are these trees replacing only what's been lost? Or are you expanding?

A: Expanding. We want to reach beyond just those in the ten communities that were affected.

Q: How do you choose to plant?

A: We have an application process that goes through a needs assessment with the communities' government and their planners.

Q: Will you be able to count trees people add with their own money?

A: We struggle with that secondary affect and we've been talking about having something available online for folk to self identify. Currently we can't get every tree in that count. We have found some success in handing out coupons at meetings and having them come back through the local nurseries.

Q: Will you hire more staff?

A: We do intend to hire one or two new staff to help with this project. Our model is to train the trainer and for those trained to speak to groups in their communities. We will reach a lot of people with this method.

Q: Would there be a possibility to leverage stimulus money with this?

A: Yes and if we can, we do have funds for public sector financing.

Q: Have you ever approached national stores, like Home Depot and Lowes, for partnership for a high impact program?

A: Home Depot has been a sponsor but they've shifted their giving to low income housing. We're now working on a grant to work with Habitat for Humanity.

Vote:

Yes – Higby, Hubbell, Nordmeyer, Hunter

Table –

No –

09-04-1189 I-Renew Energy & Sustainability Expo 2009 & 2010, Iowa Renewable Energy Association (I-Renew), Iowa City, IA
Requesting \$80,000 Match \$110,000

Recusal: Higby

The Iowa Renewable Energy Association (I-Renew) is asking for funds for their public expos for the years of 2009 and 2010. The expo's purpose is to educate Iowa consumers about issues ranging from the most basic to the advanced levels of the energy efficiency and renewable energy markets. The expo allows consumers to attend workshops and to talk directly to vendors offering a wide variety of renewable energy and energy efficiency products. This proposal is asking for help to expand I-Renew's reach beyond Eastern Iowa by promoting the event throughout the state of Iowa.

Q: With the timing of your add campaign, how quickly can we release funds?

A: IPF would be able to issue funding by the end of the summer once it's been approved with the Board. It became problematic with the DVDs but we won't be doing that this year.

Q: At the previous meeting we had said that we'd support with less request amount and a plan from I-Renew in regards to weining off the financial support. Why are you choosing to add more money this year and less money the second year?

A: I do not have that knowledge. I've only been with I-Renew for six weeks. After doing an analysis of the program, a needs assessment came back that we need to increase our media dollars to grow and then become sustainable.

Q: Is this for two years?

A: Yes, it's \$80,000 for two years.

Like the mission but it's not the Power Fund's role to fund expos.

Vote:

Yes – Hubbell – Submit and addendum for the full application to the board that it's for one year only and asking between \$20,000 to \$30,000, **Hunter, Gebhart**

Table –

No – Nordmeyer

Review of Pre-application

09-06-1197 Thompson IA and Rembrandt IA BioEnergy Park Projects Midwest Biogas LLC

Reviewed by Crosbie
Reported by Crowe

Midwest Biogas proposes to use the latest anaerobic digestion and combustion technologies to create renewable energy from biological and agricultural by-product and waste. The two Iowa sites chosen as the first project implementation sites are Thompson and Rembrandt, Iowa.

- Looks like a good return on investment but there's no feasibility studies done for the Iowa locations.
- Don't see much of a difference between this and Cornerstone BRAD.
- They'd use a feedstock dryer so not a lot of work has been done.
- This project is not necessarily new technology.
- Isn't Amana pretty dry too?
- The indirect costs would need to be fixed.
- The investment would have to be feedstock diversification.
- Wondered if this project could apply for ARRA money.
- Potentially, they could as a private industry.
- Using Power Fund dollars could be the match they would need.
- Not sure if that's something we want/should do.
- It could be a loan and not a grant unless it has technology demonstration but not sure if it exceeds the cap.
- We would have to review it.
- Uncertain that we would want to fund another type of similarly funded project.
- As a start-up, there could be some assistance from DED.
- Since we've primarily funded bovine digesters, thought that this had merit.

Vote:

Yes –

Yes, if – Higby

No, but – Hubbell – need to raise \$8-\$10 million and explain why this project is different from other digester operations, **Nordmeyer, Hunter**

No – Gebhart

09-06-1198 Cellulosic Ethanol From Paper Waste Permeate Refining, LLC

Reviewed by Higby

Permeate Refining proposes a project that will co-locate two process technologies – fiber separation and ethanol extraction-at a plant in Hopkinton, Iowa. The first phase of the project, the processing of industrial waste paper would be for a three year period to enable appropriate testing.

- Not sure that we have a big industry for paper waste in Iowa.
- The company wants to disassemble the technology in Virginia and bring it to Iowa.
- Wondering if this project is going to benefit another state.
- Not sure how this would be replicated.
- I'm not sure it is a cost effective way to recycle paper for this project to be a benefit for the state.
- Probably wouldn't use a full size plant and they wouldn't have enough wet tons per year to make a difference in the landfills.
- Would dollars be going into equipment or the moving of the equipment?
- The DNR has money for landfill projects. This could potentially qualify.

Vote:

Yes –

Yes, if –

No, but – Nordmeyer – would like to see statistics on the demand, would like to know if international paper is the only choice, and would also like to know why the project isn't staying in Virginia

No – Hubbell, Hunter, Gebhart, Higby

**09-06-1199 TechWorks: Technology Center
Cedar Valley TechWorks, Inc (501 c3)**

Reviewed by Nordmeyer

Reported by Crowe

The Office of Energy Independence considers this proposal as a “bricks and mortar” project and suggests the DDC not review the pre-application. There is consensus from the DDC not to review.

**09-06-1200 3Fueled – Biomass Infrastructure Feasibility
3Fueled LLC**

Reviewed by Nordmeyer

The company will be conducting research on a large scale for the commercial market. They want to create industrial grade pellets. The pre-application is marked for both loan and grant.

- We've looked at a number of pelletizers and briquetters.
- Couldn't find offices for the company in Iowa.
- This seems to be a start-up company that doesn't have any of the technology.

Vote:

Yes –

Yes, if – Higby

No, but –

No – Hubbell, Hunter, Nordmeyer, Gebhart

**09-06-1201 Developing mixed-source biofuel infrastructure to replace coal
Lincolnway Energy, LLC**

Reviewed by Nordmeyer

Applicant has an ethanol plant that burns coal in a fluidized bed to create power. That type of energy system can burn most products. They want to develop multiple material sources from multiple vendors to replace coal. Also, a fly ash product would be produced.

- Doesn't the DNR have to do air quality tests for each new feedstock for permitting?
- Yes, they would have to do that.
- Don't know if the mixed materials would be the cleanest product to burn.
- Transferability could be easier for other businesses with fluidized beds.
- Not necessarily economically viable.
- This is the only coal powered ethanol plant in Iowa.
- Wondering how much their putting into relative costs.

Vote:

Yes –

Yes, if –

No, but – Hunter – need more answers to the technology questions and the match dollars, **Nordmeyer** – what's the real impact and how's the replicability, **Hubbell, Gebhart** – need studies citing multiple resources and their locations

No – Higby

**09-06-1202 Dubuque Smart Water Meter Replacement Program
City of Dubuque**

Reviewed by Hubbell
Reported by Crowe

The Office of Energy Independence suggests the DDC not review the pre-application because they believe that the project could qualify for BeSmart or ARRA funds. The BeSmart program is now what used to be known as the Energy Bank. Staff didn't see a calculation of energy savings. If the project goes through the ARRA process, they would need to supply that calculation. There is consensus from the DDC not to review.

**09-06-1203 MycoMax Fungal Upgrade of Ethanol Process
Ag Ventures Alliance**

Reviewed by Gebhart
Recusal: Nordmeyer

Project seeks to improve efficiencies within the ethanol industry and add value to each gallon of ethanol produced. It looks like it's focusing on first generation biofuel production. This project would be a bolt-on operation.

- Don't see anything in the pre-application that introduces a major change.
- They estimate that they get paid back within a year.
- Wondering why they don't do it.
- The project seems largely focused on the economic footprint but not environmental.
- They still need money from DOE and USDA to make the project work.
- Indirect funding would need to be addressed before moving forward.

Vote:

Yes –

Yes, if –

No, but –

No – Gebhart, Hubbell, Higby, Hunter

09-06-1204 Seed Funding Request for the Renewable Energy Network for Aggregated and Integrative Services (RENAIS)

Reviewed Hunter
Reported by Crowe

The Office of Energy Independence suggests the DDC not review the pre-application because they consider the project a start-up of a consulting firm that's largely a sales and marketing firm. There is consensus from the DDC not to review.

**09-06-1205 Petroleum Replacement Fuels and Chemicals from Advanced Catalysis
Renewable Energy Group, Inc.; Elevance Renewable Sciences, Inc.**

Reviewed by Codel
Reported by Crowe

This proposal is for the construction of a demonstration scale integrated biorefinery. The biorefinery will convert renewable raw materials largely sourced from Iowa into petroleum replacement fuels and specialty chemicals.

- Interesting technology compared to some of the projects that have been reviewed today.
- Don't feel that they're invested in the match.
- I liked the idea and wondered if this could qualify for ARRA money?

- Because of the research and development component, the project might not qualify, although new opportunities are posted on a regular basis.
- We could ask that they reduce their request amount.
- Are they going to sell what they produce?
- Think it would be of interest to see a full proposal.
- Needs to be made clear if it's easily replicable around Iowa.
- Could be a loan as well.

Vote:

Yes –

Yes, if – Hubbell – If they ask for a smaller request amount, address the IP issues, explain their funding sources and explain how they plan to replicate the project, **Nordmeyer, Higby, Gebhart, Hunter**

No, but –

No –

**09-06-1206 Vacuum Insulating System for High Efficiency & High Reliability Windows
EverSealed Windows, Inc.**

Reviewed by Higby

Reported by Crowe

The Office of Energy Independence suggests the DDC not review the pre-application because the applicant is not based in Iowa and it seems that they would have adequate financial resources. This was not the consensus with the DDC. Ms. Higby was impressed with the proposed technology and would like to see more about this project. The DDC then reviewed the project.

- Pella (Windows) did send a letter of support but not a letter of commitment for the project.
- The staff is not sure that the work would be done in Iowa but it was pointed out that the company states on page two of the application, bottom paragraph, which states that an Iowa lab has done the preliminary work and the company would move their corporate office to Iowa.
- There is benefit from this project and if Pella's committed, the DDC would like to know how much and what is the DOE's involvement.
- The portion listed for the "bricks and mortar" would have to be removed.
- Not sure if DED would be involved in the company's move.
- Salaries, travel and consulting budget items are quite high, too.
- Indirect costs cannot be more than 10% and the proposal lists it at 12%.

Vote:

Yes –

Yes, if – Higby

No, but – Hunter – answer budget and benefit questions to the taxpayers of Iowa, **Nordmeyer, Hubbell, Gebhart**

No –

**09-06-1207 A Bio-refinery to Manufacture High Value Chemicals from Non Food Biomass
Sriya Innovations**

Reviewed by Hubbell

The project would be a commercial scale plant that will have the flexibility to produce different output products depending on high market demand value. The project proposes to use cellulosic farm waste termed "Non Food Biomass" as the feedstock for the biorefinery.

- Have some issues with the replicability piece.
- Would do a combined approach.
- Technology is new and different.
- They don't need to use enzymes and acid.
- They want to construct a facility to start producing 80 tons with the intention of ramping up to 320 tons. We'd need to be clear that additional plants would need to be in Iowa.

- Technology has had some vetting.
- Iowa State University is doing some analytical work on this so it's not completely new.
- We would need to be clear that the match would be in place before Power Fund money would be spent.
- It seems that they are looking at different sites in Iowa but unsure about where the project would be located at this time.
- Not sure the amount of energy that would be used to create all the chemicals. We would want to know that.

Vote:

Yes –

Yes, if – Higby, Hubbell, Nordmeyer, Hunter – clearly define replicability plan, any additional plants would need to be in Iowa, match needs to be in place before Power Fund dollars would be spent, and need to know the energy usage necessary for the process.

No, but –

No –

**09-02-1176R SynGest BioAmmonia Production from Biomass
SynGest, Inc.**

Reviewed by Hunter

SynGest proposes to build its first commercial scale facility in Southwest Iowa to convert non-food biomass into bioammonia. This product will be identical to the ammonia produced by natural gas. Also, the process would generate the energy needed to operate the facility while creating biochar and ash which are two types of soil amendments.

- Could have a benefit for the state.
- There's an exclusive in and out for only one company.
- A potential question could be "How the Power Fund would be paid back?"
- We should suggest they lean towards a loan.
- They plan to go through the DOE process.
- We could send DOE a letter of support if we want to move forward.

Vote:

Yes – Higby

Yes, if – Hubbell, Nordmeyer, Hunter – If they have a positive read from DOE, have a better hold on their finances, are clear about repayment to the Power Fund, explain/correct their IP issues, state their locations in Iowa.

No, but –

No –

**09-06-1208 The aquatic carbon footprint of biofuels production: managing uptake,
sequestration, and conversion
Iowa State University**

Reviewed by Codel

Reported by Crowe

The Office of Energy Independence suggests the DDC not review the pre-application because, even though it was acknowledged that this is important work, the project does not have cost share. Staff believes the project should have some industry buy-in. Ms. Higby questions why the DDC wouldn't vote on this pre-application since the pre-application doesn't have any technical issues. A vote was taken.

Vote:

Yes –

Yes, if –

No, but –

No – Higby, Nordmeyer, Hubbell, Hunter

**09-06-1209 World Food Prize Hall of Laureates
The World Food Prize Foundation**

Reviewed by Crosbie
Reported by Crowe

The Office of Energy Independence considers suggests the DDC not review the pre-application because the project is primarily “bricks and mortar” and could possibly be a strong candidate for BeSmart or ARRA funding. There is consensus from the DDC not to review.

Other Business

The next Due Diligence meeting will be on August 26th at the Department of Development (DED). The time is TBD.

Adjournment

Mr. Hunter made a motion to adjourn the meeting; Mr. Hubbell seconded the motion. The motion passed unanimously. The meeting is adjourned at 5:25p.m.

Respectfully Submitted,

Mary Lewis, Recorder

DRAFT