

January 5, 2015

North Dakota Industrial Commission
ATT: Renewable Energy Development Program
State Capitol – 14th Floor
600 East Boulevard
Bismarck, ND 58505

RE: Growing the Bioscience Industry in North Dakota


Attached is a proposal to the Renewable Energy Program from the Bioscience Association of North Dakota (BioND). A strong bioscience association is needed in North Dakota to bring bioindustry leaders together to collaborate and network to grow the bioindustry through strategic innovation, entrepreneurship and investment.

North Dakota has a nascent, but growing, biotech industry that has not yet reached its potential. BioND will bring various agricultural and bioindustry leaders together to explore opportunities for technology commercialization, innovation, and economic development projects in the biomaterials and biofuels sectors. There are abundant opportunities to grow the biochemical sector as indicated in the July 2014 Empower Study with the North Dakota Department of Commerce. Our state has the diverse agricultural resources and the talent to capitalize on numerous bioindustry opportunities. BioND is an association that can be vital in capturing those opportunities.

On behalf of the board of directors of Bioscience Association of North Dakota, this letter serves as a binding commitment to complete the project as described in the attached application.

Thank you for your favorable consideration.

Respectfully submitted,



Bruce Gjovig, CEO
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PS. Attached is a \$100 check payable to the State of North Dakota



Renewable Energy Program

North Dakota Industrial Commission

Application

Project Title: Growing the Bioscience Industry in North Dakota

Applicant: Bioscience Association of North Dakota (BioND)

Principal Investigator: Bruce Gjovig
President, BioND

Date of Application: January 1, 2015

Amount of Request: \$60,000

Total Amount of Proposed Project: \$120,000

Duration of Project: 18 months

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ABSTRACT

Objective: Bioscience Association of North Dakota (BioND) is a state-wide association to support the biotech, biomaterials, biofuels and life sciences industry clusters through industry networks and collaboration. BioND is the newest chapter (47th state) of the national Biotechnology Industry Organization (BIO) focused on members needs, educational programs, economic development and advocacy. A primary objective of BioND is to grow and diversify the economy with more bio companies (esp. a focus on biofuels and biomaterials industries utilizing new technologies) to build, fuel, feed and heal the world. BioND is ready to graduate from a volunteer organization by hiring its first Executive Director who can implement the following project which is proposed for support from NDIC's Renewable Energy Program. As the voice of the industry, growth of the BioND organization will provide educational and networking opportunities as well as promote value-added market opportunities.

Expected Results:

1. Grow BioND from 30 members to 50 in year one to 75 in year 2 using the Fisher Scientific incentives for bio-industry members. Also income from sponsorships, partnerships & educ.
2. Hold annual BioIndustry Action Summit with a focus on biofuels and biomaterials in 2015 and 2016, co-hosted with NDSU Ag and Biosystems Engineering.
3. Identify one or more biomaterial or biofuel project(s) to develop, building upon potential for value-added market opportunities identified in the 2014 Study to Evaluate Value Added Market Opportunities for ND Biochemical Derivatives.

Duration:

Market Opportunities for ND Biochemical Derivatives.

Project duration is 18 months from the contract date.

Total Project Cost:

\$120,000 - \$60,000 NDIC's REP grant funds, \$33,000 designated funding from BioND, \$12,000 from in-kind furnished office support and services, and \$15,000 in-kind volunteer staff support from the BioND board, membership, and Fisher Scientific.

Participants:

Bioscience Association of North Dakota (BioND) has an 11 member volunteer board representing the bio industry including leaders from the Corn Growers, Soybean Growers, Ethanol Producers, Wheat Growers, Sugar Beet Growers, Potato Growers, and entrepreneurs in the biofuels, biomaterials, and bio industries. More grower's groups will be approached for membership and collaborative engagement to grow opportunities in the industry. There are over 400 companies and entrepreneurs in bio-related industries in North Dakota who are potential members. For this project, BioND will be hiring an experienced Executive Director with a background in economic development, assoc. management and entrepreneurship. This highly-qualified candidate has agreed to accept the challenge of being the first ED to grow BioND and the bio industry in North Dakota. Joni Johnson, Executive Director of South Dakota Biotech, has agreed to mentor our new ED, and is looking for opportunities for joint educational programs, initiatives, etc. Fisher Scientific has agreed to approach existing clients in North Dakota to join BioND and has asked BioND board members and the new ED to accompany company reps on visits to targeted companies for mutual benefit

PROJECT DESCRIPTION

- Objectives:**
1. Establish the BioND organization as the voice of the industry in North Dakota and develop the organization to the next level by learning from other successful state programs.
 2. Expand organization membership among ag growers, groups and associations interested in biomaterials, biofuels, and bioscience opportunities to build the bio industry sectors.
 3. Provide incentives to BioND members for purchasing lab equipment, chemicals, materials and services and solicit support for BioND.
 4. Provide educational and networking opportunities through an annual BioIndustry Action Summits with a focus on biofuels and biomaterials in 2015 and 2016, co-hosted with NDSU Ag and Biosystems Engineering.
 5. Grow and diversify the state's economy with bio companies and startups, focus on biofuels and biomaterials industries, and foster new technologies to build, fuel, feed and heal the world. Identify one or more biomaterial or biofuel project(s) to develop, building upon potential for value-added market opportunities identified for ethanol and other biochemical derivatives. (IAS study, June, 2014)

Methodology: Success will be measures by:

1. For this project, BioND has developed an Exec Director job description, advertised the position statewide, and identified a strong candidate with experience in economic development, association management and entrepreneurship. The newly-hired ED will implement the project with mentorship from SD Biotech's ED.
2. BioND will run a membership campaign targeting biofuels, biomaterials and ag growers groups. along with sponsorships and partnerships. 400 potential members are identified in ND.
3. Collaborate with Fisher Scientific. Fisher will approach existing customers offering a BioND discount on lab equipment, chemicals, supplies and services; Fisher and BioND will approach prospective new members.
4. BioND will plan, execute and co-host BioIndustry Action Summits in 2015 & 2016
5. BioND will identify one or more biomaterial or biofuel project(s) to develop, building upon potential for value-added market opportunities identified by a 2014 study to evaluate value added market opportunities in North Dakota with biochemical derivatives.

Anticipated Results:

- 1) Organization's first executive director will join the organization and receive mentoring from SD Biotech's ED to initiate the project and grow the organization.
- 2) Membership will increase from 30 to 50 members in 2015 and 75 into 2016. To help BioND achieve sustainability, BioND negotiated with Fisher Scientific an incentive (deep discount) on laboratory equipment, chemicals, supplies, and services - a great value to biofuels and biomaterials companies. Sponsorships and partnerships are also a measure.
- 3) Fisher incentives will provide benefits to members and, in turn, help attract new members.
- 4) BioND will hold successful annual BioIndustry Action Summits with a focus on biofuels and biomaterials in 2015 and 2016, co-hosted with NDSU Ag and Biosystems Engineering
- 5) BioND will utilize a study of value-added market opportunities to identify one or more bio

Facilities: development opportunities to support.

The UND Center for Innovation Foundation will donate an incubator office in Grand Forks for the new Executive Director for eight months to provide office space, meeting space, office support, and a supportive environment to grow the new association. The North Dakota Corn Growers Association and the NDSU Research and Technology Park will also donate office space in Fargo when the Executive Director is in the Fargo region. This will put the Executive Director, board members and BioND members in close contact with many university entrepreneurs and provides convenient meeting space for educational networking and collaborative efforts by the members.

Resources:

BioND has earmarked \$33,000 from its 2015-16 budget for this project. The funds are on deposit and committed to provide a portion of the ED's salary. Furnished office space will be provided in Grand Forks (UND Center for Innovation Foundation incubator) and in Fargo (ND Corn Growers Assoc Office & NDSU Research & Tech Park incubator) with a cumulative value of \$1,500 per month for 8 months (\$12,000) plus volunteer staff support from BioND board members and Fisher Scientific staff for another \$15,000 in-kind support. (Note: other BioND organization income for partnerships, memberships, sponsorships are not included in the budget for this proposal.)

Techniques to Be Used, Their Availability and Capability:

The 11 member Board of Directors of the BioND are committed to building and sustaining the association to support biomaterials, biofuels, biotech, and health sciences clusters in North Dakota. The board is comprised of industry leaders and influencers who have reputation of building on opportunities. An experienced executive director has been identified with 15 years in successful economic development and association management experience as well as six years of entrepreneurship. Teaming up with SD Biotech and Fisher Scientific increases the opportunity for success. The talent and leadership is available to communicate, educate, collaborate and network to achieve results, and the capacity to succeed is high based on previous history of the team.

Environmental and Economic Impacts while Project is Underway:

There are no environmental impacts while this project is underway. The economic impact over the next 18 months will be the growth of a young biotech association in the state, securing a critical mass of bioindustry entrepreneurs and companies as members (thus association sustainability), holding annual BioIndustry Action Summits focused on biomaterials and biofuels, and identifying an bio-industry development projects to foster and support. The impact from collaborative efforts is hard to predict, but developing a robust bio ecosystem with numerous opportunities to educate, network and collaborate will yield numerous impacts.

Ultimate Technological and Economic Impacts:

A key BioND goal is to foster and support innovation and technology in the biotech industry to diversify the state's economy by growing globally competitive biotech companies. There are more than 400 bio-related companies in ND employing over 3,600 people as of 2010, growing 38% since 2001. A large majority are in ag related industries including biofuels and biomaterials. There are abundant opportunities to grow the biochemical sector as a July 2014 Empower study with the ND Dept of Commerce indicates. Our state has the diverse agriculture resources and the talent to capitalize on numerous bio opportunities.

Why the Project is Needed:

A strong bioscience association is needed in North Dakota to bring bioindustry leaders together to collaborate and network to grow the bioindustry through strategic innovation, entrepreneurship and investment. There are many growers groups and associations, as well as bio-entrepreneurs and companies, who are all doing their own thing, but rarely get together to develop strategies for growth and opportunity in the bioindustry. BioND can bring the various bioindustry leaders together regularly on projects and initiatives - just as we advocated for the National Ag Genotyping Center following the lead of our board member Tom Lilja of the ND Corn Growers Assoc. The industry needs a voice but BioND must grow from a nascent, volunteer-run organization in order to effectively represent the industry and develop opportunities for education, networking and marketing.

STANDARDS OF SUCCESS

Standards of Success should include: The measurable deliverables of the project that will determine whether it is a success; The value to North Dakota; An explanation of what parts of the public and private sector will likely make use of the project's results, and when and in what way; The potential that commercial use will be made of the project's results; How the project will enhance the education, research, development and marketing of North Dakota's renewable energy resources; How it will preserve existing jobs and create new ones; How it will otherwise satisfy the purposes established in the mission of the Program.

The Measurable Deliverables are:

- 1) Organization's first executive director will join the organization and receive mentoring from SD Biotech's ED to begin the project.
- 2) Through the development and implementation of a membership drive, membership will grow from 30 to 50 members in 2015 and 75 into 2016.
- 3) Provide incentives to members: to help BioND achieve sustainability, BioND negotiated with Fisher Scientific an incentive (deep discount) on laboratory equipment, chemicals, supplies, and services - a great value to biofuels and biomaterials companies. Sponsorships and partnerships are also a measure.
- 4) BioND will hold annual BioIndustry Action Summits with a focus on biofuels and biomaterials in 2015 and 2016, co-hosted with NDSU Ag and Biosystems Engineering
- 5) BioND will utilize a study of value-added market opportunities to identify one or more bio development opportunities to support.

Standards of Success for North Dakota:

North Dakota will benefit from a vibrant, growing Bioscience association which brings together many members who are key bioindustry leaders to advance and grow the bioindustry. BioND is an association that is chartered to advance innovation and entrepreneurship, commercialization of new technologies, and by the nature of associations there will be strong focus on R&D, innovation, education, networking and marketing of North Dakota's resources. The primary beneficiaries are private sector biotech companies and entrepreneurs collaborating for mutual gain, networking with industry leaders in ND, SD and elsewhere. The research universities will benefit from more R&D and innovation activity and both NDSU and UND have targeted the bioindustry for research growth. The economic development aspect will create jobs through company growth and new entrepreneurial activity. Strengthening the ties between leaders in the bioindustry will yield opportunities to be more competitive, collaborate, and capitalize on emerging opportunities. The state gains through diversification and private sector growth. Farmers will gain by new markets for crops.

BACKGROUND/QUALIFICATIONS

*Please provide a summary of prior work related to the project conducted by the applicant and other participants as well as by other organizations. **This should also include summary of the experience and qualifications pertinent to the project of the applicant, principal investigator, and other participants in the project.***

The Bioscience Association of North Dakota (BioND) is affiliated with the national Biotechnology Industry Association (BIO) which is the largest biotech organization in the world representing over 1,000 companies employing 1.6 million people. North Dakota is the 47th state affiliate of BIO.

BioND has an 11 member board of directors who are industry leaders:

President, Bruce Gjovig, CEO, UND Center for Innovation Foundation, Grand Forks

Vice Pres. John Ballantyne, PhD, Chief Scientific Officer, Aldevron, Fargo

Secretary: Joel Gilbertson, JD, Partner, Vogel Law Firm, Bismarck

Treas. Sen. Terry Wanzek, Legislator & Farm Owner, TMT Farms, Jamestown

Director: Randy Schneider, CPA, Pres. ND Ethanol Producers Association, Bismarck

Director: Richard Glynn, COO, Avianax, Grand Forks (& Schiltz Goose Farm, Tolna)

Director: Tom Lilja, Exec. Director, North Dakota Corn Growers Assoc. Fargo

Director: Rep. Lois Delmore, Legislator & retired teacher, Grand Forks

Director: Ken Hellevang, PhD, NDSU Ag & Biosystems Engineering Dept, Fargo

Director: Nancy Johnson, Exec. Director, ND Soybean Growers Assoc. Fargo (as of 2015)

Ex-Officio: TBD (Bio staff person at ND Department of Commerce, Bismarck)

This is an august and diverse group of highly experienced and successful professionals in bio-related industries. This group has a significant history of successfully building ventures and organizations.

The Executive Director to be hired has 15 years successful experience in economic development and related association management and 6.5 years as a professor of entrepreneurship and director of a rural entrepreneur program. His peers elected him President of the Economic Development Association of North Dakota (EDND). He is a certified economic development professional (EDFP) through the National Development Council (NDC). We will work closely with Joni Johnson, Exec. Director of South Dakota Biotech as she has offered to work closely with BioND to accelerate our growth and sustainability and pursue joint programming. Joni will mentor our Exec. Director, and she has grown SD Biotech into a vibrant presence in South Dakota with 66 members, several networking and collaborative events, and solid income from memberships, sponsorships, partnerships, and educational opportunities.

Fisher Scientific Inc. is the world leader in serving science, with revenues of \$17 billion and 50,000 employees in 50 countries. BioND formed a strategic alliance in 2014 to support the product and supply chain service needs of North Dakota bioscience companies to help accelerate the industry's growth and innovation. With the strategic alliance, BioND and Fisher entered into a Primary Supplier Agreement enabling BioND Members to achieve significant savings on laboratory supplies, equipment, chemicals and services for the bio industry. This provides a terrific incentive for bioindustry members to join BioND. They also foster sharing of valuable equipment and knowledge in the bioindustry to help bio companies grow.

MANAGEMENT

*A description of **how** the applicant will manage and oversee the project to ensure it is being carried out on schedule and in a manner that best ensures its objectives will be met, **and a description of the evaluation points to be used** during the course of the project.*

Bioscience Association of North Dakota (BioND) is the voice of the bio industry and has a volunteer board of 11 members. Leadership on this project will be provided by the entire BioND board, chaired by Bruce Gjovig who has 30 years experience with venture development, innovation, entrepreneurship and angel investing. He has been involved in several economic development initiatives to develop new industry clusters in the state, and his Center has received 15 national and international awards for excellence. The Center for Innovation has helped over 700 startups in North Dakota over 30 years, which employ more than 6,000 people and have raised more than \$150 million in growth capital.

Management:

The management of the project -- the growth of BioND, the membership drive, facilitating collaboration and networking of BioND members, and the objectives of growing the biofuels and biomaterials industry -- will be invested in the new Executive Director, who has a background of 15 years of successful economic development and association management plus six years in entrepreneurship.

Membership Project:

The Board, Pres and Exec Director of BioND will develop a 18 month membership campaign to secure membership from many of the 400 bio-related entrepreneurs and firms in the state in the biofuels, biomaterials, biosciences and life sciences industry sectors that employ over 3,600 people in ND. The relationship with Fisher Scientific will be helpful as incentives for BioND members has been negotiated on laboratory equipment, chemicals, supplies and services - a major incentive to join. During this campaign a statewide Bio-Industry Action Summit will be held annually focused on biomaterials and biofuels to help attract members as well as educate and promote development. BioND will launch and/or support one or more bio development projects. This will be done by bringing existing and new members together in educational networking events to collaboratively seek bio opportunities as we lent support to securing the National Ag Genotyping Center at NDSU this fall.

Financial oversight:

Sen. Terry Wanzek is Treasurer of BioND, and Bruce Gjovig is the President of BioND. The board of directors meets eleven times a year (monthly), and a financial report is made at each board meeting. Progress on this project will be reported at each board meeting.

Evaluation Points:

End of each quarter an assessment will be made on progress, changes and adaptations made as needed, and an interim report will be submitted at 9 months (halfway) on Oct 1, 2015 and a final report on July 1, 2016.

TIMETABLE

Please provide a project schedule setting forth the starting and completion dates, dates for completing major project activities, and proposed dates upon which the interim reports will be submitted.

Quarter 1, 2015: Grant Secured, Executive Director receives training with South Dakota Biotech; project initiated, Fisher Scientific timelines established; membership materials will be developed; planning continues on BioIndustry Action Summit.

Q2, 2015: Board members, Exec Director & Fisher Scientific will commence meeting with the targeted bio industry entrepreneurs and companies statewide for membership and engagement. Second annual Bio-Industry Action Summit will be held in Fargo in conjunction with NDSU Ag and Biosystems Engineering Dept. Bioindustry development opportunities will be sought.

Q3 2015: An intense membership drive will be held during the summer months utilizing a list of more than 400 potential members. Strategic Planning will be done with the BioND board, existing and new and members, and others to identify potential bioindustry project opportunities through networking and educational initiatives.

Interim Report:

Oct 1, 2015 - Submit Interim Report to Renewable Energy Program

Q4, 2015: Continue membership drive, continue bioindustry project development project, continue networking and collaboration meetings; planning commence on 2016 Bio-Industry Action Summit.

Q1 2016: Continue membership drive, continue planning for 2016 BioIndustry Action Summit, continue activities on bioindustry development project.

Q2 2016: Complete the project membership drive, host third annual Bio-industry Action Summit in conjunction with NDSU Ag and Biosystems Engineering Dept, advance on bio-industry development project.

Final Report:

Submit Final report on July 1, 2016

BUDGET

Please use the table below to provide an **itemized list** of the project's capital costs; direct operating costs, including salaries; and indirect costs; and an explanation of which of these costs will be supported by the grant and in what amount. The budget should identify all other committed and prospective funding sources and the amount of funding from each source. **Please feel free to add columns and rows as needed.** Higher priority will be given to those projects have matching private industry investment equal to at least 50% or more of total cost.

Project Associated Expense	NDIC's Share	Applicant's Share (Cash)	Applicant's Share (In-Kind)	Other Project Sponsor's Share
Exec Director	\$60,000	\$33,000		
Office Space			\$12,000	
Volunteer Staff			\$15,000	

Please use the space below to justify project associated expenses, and discuss if less funding is available than that requested, whether the project's objectives will be unattainable or delayed.

\$93,000 is budgeted for the Executive Director for the 18 month project, and income from new and renewing memberships as well as sponsorship, event income, etc. will sustain this position longer term.

\$12,000 is donated office space in Grand Forks (UND Center for Innovation Foundation tech incubator) and Fargo (ND Corn Growers Association Office and the NDSU Research & Tech Park incubator) at a rate of \$1,500 per month for the first 8 months of 2015.

\$15,000 is donated staff time by the 11 member board of BioND, Joni Johnson, Executive Director of South Dakota, and two Fisher Scientific staff will work closely with the new Executive Director to secure new members, do strategic planning on bio initiatives, find a bio industry development project, and build a strong, sustainable association. At \$50 per hour for professional time, this is 300 hours of in-kind value over 78 weeks which is less than 4 hours per week from 14 people. The actual volunteer time will obviously be much higher but this will meet the match requirement.

Match:

\$33,000 of cash match is on deposit that BioND committed to this project. All matching funds, cash and in-kind, are essentially a private industry investment as BioND membership income comes from bioindustry leaders, and most of the board leadership is from private industry.

If full funding is not achieved, the project's objectives may be jeopardized as the Executive Director may not be available if delays are experienced. If the Executive Director is willing to work with us on a more limited budget, the project may be accomplished over a longer period of time, and extension of six months or more.

CONFIDENTIAL INFORMATION

Any information in the application that is entitled to confidentiality and which the applicant wants to be kept confidential should, if possible, be placed in an appendix to allow for administrative ease in protecting the information from public disclosure while allowing public access to the rest of the application. Such information must be clearly labeled as confidential and the applicant must provide all required information set forth in NDCC 54-63-02. If there is no confidential information please note that below.

There is no confidential information in this proposal.

PATENTS/RIGHTS TO TECHNICAL DATA

Any patents or rights that the applicant wishes to reserve must be identified in the application. If this does not apply to your proposal, please note that below.

There is no intellectual property associated with this proposal.

Tax Liability

The Bioscience Association of North Dakota (BioND) does not have an outstanding tax liability owed to the State of North Dakota or any of its political subdivisions. Bruce Gjovig, President 1/1/15