

Wind Power Electrical Generation in a Cooperative System

Submitted to:
USDA RURAL DEVELOPMENT
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Proposal Summary

Application for Planning Grant

Wind Power Electrical Generation in a Cooperative System

Harvest Land Cooperative is a 100% farmer owned grain and farm supply cooperative headquartered in the south central Minnesota community of Morgan, with additional facilities in Morton, Comfrey, Wabasso and Springfield, MN. In accordance with its bylaws, only active farmers may be members of the cooperative. The cooperative has been in business since 1904, providing its patrons with traditional grain handling, agronomic and farm supply services. In addition, the cooperative has a proven track record of developing successful new businesses to leverage their assets and core competencies; profits are used to revolve member equity in the cooperative.

Over the past year, management has begun assessing a new business venture: the cooperative generation and sale of electricity from wind turbines sited on land owned by co-op members. The goal of this business would be to increase net returns to the co-op's members and provide a conduit for investment in wind power for all co-op members. In this application, Harvest Land Cooperative seeks a planning grant of \$148,000 to assess the feasibility of a 100% farmer/member owned enterprise that will coordinate and finance the development, construction and operation of on-farm wind turbines on member land. If shown feasible, business planning will take place to chart how the cooperative should structure and enter this business opportunity.

Cooperative Development Services (CDS) will be responsible for feasibility analysis and business planning. CDS is a non-profit cooperative development organization with substantial experience in the conduct of feasibility studies of producer owned value added ventures, with specific previous work in the area of both farmer and municipally owned wind power. Lead consultants on the project are anticipated to be Ken Campbell and E.G. Nadeau. Legal analysis will be provided by attorney Reed Glawe of the firm of Gislason XXX, and accounting analysis provided by Dale Carlson of the public accounting firm Schuetzle, Carlson and Co. These are reputable Minnesota firms that specialize in co-op law and accounting respectively.

Substantial involvement and technical support is expected from a team composed of general manager Mike Weelborg, asst. general manager Gordy Jenson, finance division head Dave Stuk, finance division CFO Sadie Reiners, grain division manager Kevin DeBerg, and sr. credit manager Sean Stocker. Stuk will serve as the team project leader.

The feasibility study is anticipated to require no more than 8 months to complete. Business plan development is anticipated to take no more than 4 months following completion of the feasibility analysis.

Eligibility

Harvest Land Cooperative is a 100% farmer owned grain and farm supply cooperative headquartered in the south central Minnesota community of Morgan, with additional facilities in Morton, Comfrey, Wabasso and Springfield, MN. The cooperative is organized under Chapter 308A of Minnesota statutes. In accordance with its bylaws, all members of the cooperative must be active farmers; current membership of the cooperative is 1083. The cooperative has been in business since 1904, providing its patrons in 12 south central and southwestern Minnesota counties with traditional grain handling, agronomic, fuel and farm supply services. Revenues in the most recent fiscal year (2001) were \$22,061,927; net margin in that year was \$3,221,307.

In addition to its traditional business lines, the cooperative has a proven track record of developing successful new businesses to leverage their assets and core competencies; to date these include the Turkey Division (turkey production, created in 1987), Harvest Land Financial (loans and insurance, formed in 1992), Northland Capital (equipment leasing, formed in 1996), AgQuest Financial (loans, leases, and insurances, done in conjunction with other co-ops in the region, formed in 1999), and AgQuest Insurance (crop, property and casualty, and life insurance, done with other co-ops in the region, and formed in 2000). In addition to the services provided to members and the leveraging of co-op assets (such as increasing feed and agronomy services revenues), profits from these operations are used to revolve member equity in the cooperative. Since their inception, these businesses have generated accumulated net profits of over \$8,455,000.

Because of a documented need for additional electrical generating capacity in Minnesota and the surrounding region, state and federal incentives and mandates for renewable energy, and the increasing cost competitiveness and consistent performance of wind powered electrical generation technology, wind power is an emerging market opportunity for landowners with suitable sites. Total wind power generation capacity in Minnesota has increased from 800,000 MW to 1,300,000 MW in the last 3 years, with additional capacity under construction. Currently wind energy accounts for less than 2.0 percent of Minnesota's yearly electric power requirement. As mandated by the Minnesota State legislature, Xcel Energy is required to contract for an additional 400 MW of wind energy by 2012. However, capital investment costs are high, virtually requiring a broad base of farmer investors for project success.

The cooperative seeks a VADG planning grant in order to assess the technical and market feasibility of, and develop a business plan for, a 100% farmer owned and coordinated wind power generation business. The proposed business concept is for the cooperative to assist its farmer members enter the wind power business by a) identifying and assisting farmer members to assess the suitability of their farmland for wind power generation, and b) creating a 100% member/farmer owned and controlled business entity that builds, operates and finances wind turbines on suitable member lands, and which sells the resulting electricity. While the optimal scale of the venture is one of the topics to be addressed in the feasibility analysis and business planning, the current project concept is to develop 5 or 6 individual units, each with 2 MW of generation capacity. (These parameters were chosen to maximize the value of existing state production incentives and

conform to perceived bidding specifications of electricity buyers). Total estimated investment for a project of this size is \$10.5 million. VADG funding, with applicant cash and in kind match, will be used to obtain needed legal and accounting services and hire consultants to conduct the feasibility study and develop the business plan.

To summarize, this proposal meets the criteria for the VADG program as follows:

1. The applicant is an existing 100% farmer owned cooperative whose members are all active independent producers. The cooperative is organized and operating under appropriate state and federal statutes.
2. The proposed study seeks to evaluate options and structures for a business entity that is 100% owned by independent producers, meeting requirements called for in the NOFA.
3. The applicant seeks to develop renewable energy generation capacity through on-farm wind turbines, thus meeting the definition of an eligible value-added activity.
4. Wind power currently supplies less than 2% of the state's electric power supplies, but is growing rapidly. Mandates in place call for substantial further growth in the next 10 years, thus meeting the requirement for involvement in an emerging market opportunity.
5. The proposal will use funds for the conduct of a feasibility study and the development of a business plan, employing appropriate legal, accounting and other appropriate consulting services, clearly meeting the requirements for allowable expenditures.

Project Title:

Wind Power Electrical Generation in a Cooperative System

Information Sheet

Pg. #

1. Nature of Proposed Venture (max. 5 points)
2. Qualifications of Those Doing the Studies (max. 5 points)
3. Project Leadership (max. 5 points)
4. Commitment (max. 5 points)
5. Work Plan/Budget (max. 5 points)
6. Amount Requested (max. 2 points)
7. Project Cost per Producer that are Owners (max. 5 points)
8. Administrator Priority Points

Goals of the Project

The goal of the project “Wind Power Electrical Generation in a Cooperative System” is to directly increase farmer-member income. The project proposes to accomplish this by creating a new business entity (owned by the cooperative) to coordinate and finance the development, construction and operation of on-farm wind turbines on suitable member lands, and the sale of resulting electricity. This project will add value to member-owned resources (land, wind rights, existing cooperative business operations) and provide a conduit for investment by all members of Harvest Land Cooperative. To the extent that the cooperative is itself an investor in the unit, profits of the venture will recur to all members of the cooperative, and will be used to revolve member equity. Additional benefits of this project will be to enhance the rural economy of south central and southwest Minnesota, and ensure that agricultural producers will be a valued and essential link in the region’s electrical production chain.

Evaluation Criteria

Nature of Proposed Venture

Background: Like many other parts of the country, Minnesota faces a shortfall of electrical generation capacity over the coming decade. The existence of favorable sites for wind power development, improvements in the operating efficiency of wind turbine technologies, proactive marketing of “green” energy to consumers, and the state mandated use of renewable energy by Xcel Energy have allowed wind power projects to more effectively compete to become part of the state’s energy production mix. Total wind power generation capacity in Minnesota has increased from 800,000 MW to 1,300,000 MW in the last 3 years, with additional capacity under construction. Currently wind energy accounts for less than 2.0 percent of Minnesota’s yearly electric power requirement. As mandated by the Minnesota State Legislature, Xcel Energy is required to contract for an additional 400 MW of wind energy by 2012. The best sites for wind power generation are generally in the western portions of the state, with the most concentrated production occurring in the Buffalo Ridges area of Lincoln and Pipestone counties in southwest Minnesota.

The growth of wind power generation of electricity demonstrates the technical feasibility of various generation systems, and the last several years have seen a substantial maturation of generation technologies. The dominant model currently in use for the development of wind power in Minnesota is for a development company to move into an area with suitable sites, lease wind rights from willing landowners, secure a power purchase agreement with a utility, and then finance the construction and operation of turbines. Revenues from the sale of electricity are used to pay rental rates to landowners and provide for the on-going maintenance of the turbines, and these dollars tend to stay fairly local in their distribution; substantial net profits however are exported from the

rural communities that created them. Early in the development of wind technologies, this process was an appropriate and risk averse means for landowners to participate, since they did not bear the risk of energy marketing or system performance, yet received rental payments in excess of what they might otherwise have secured for crop production. As technologies have matured however, and the performance and efficiency of wind systems have substantially increased (to the point where the cost of wind generated electricity is approaching the cost of coal generation), this model leaves landowners receiving a substantially lower return from wind rights than if they were active participants in the development process. This suggestion is further supported by the substantial rates of return currently experienced by development companies.

Of similar concern to rural residents, this dominant development model calls for the export of net income from the operations to investors located in corporate headquarters outside the region and typically outside the state. To the extent that ownership of systems is profitable, and if profits were to be returned to local owner/investors, the entire rural economy would experience greater flows of income and investment, with the related economic multiplier impacts. Clearly it is time for a re-examination of the ability for local landowner/investors to participate in this maturing industry, with the goal of directly increasing landowner and local farmer/investor income.

In this context, a natural champion for such a re-examination might be a successful farm supply cooperative whose service area includes substantial numbers of suitable sites owned by its members, and that is committed to using the strength of its cooperative business to generate additional returns for its members. Harvest Land Cooperative is such a cooperative.

Harvest Land research to date: Harvest Land Cooperative has conducted initial assessments of wind power technology and operations, with the following findings.

The cooperative has members with lands suitable for wind power development. The service territory served by the cooperative includes the Buffalo Ridge area of southwestern Minnesota, and the cooperative has many members in this region. (As noted previously, the Buffalo Ridge region is the most actively developed wind power area in the state). An initial analysis using published wind speed data suggests that there are many co-op members in the Buffalo Ridge area that would be capable of supporting turbine siting. In addition, the cooperative has members in other areas that may have lands suitable for the siting of turbines.

For the purposes of preliminary analysis, the cooperative has identified turbine systems currently in use in the region and in the US, and determined that proven technologies do exist, and that infrastructure exists in Minnesota to support these technologies. Two products have been examined to date: the NEG Micon 950 kW turbine and the Vestas 660 kW turbine. Both NEG Micon and Vestas turbines are engineered and manufactured in Denmark. The United States headquarters for NEG Micon is in Rolling Meadows, Illinois and the United States headquarters for Vestas is in Portland, Oregon. Micon and

Vestas are the 2 largest wind system manufacturers in the world. Both manufacturers provide a 5-year full warranty period and have local Minnesota service departments.

The cooperative has also conducted initial assessments of potential scales of required investment. Based on existing wind turbine projects and placements, a maximum of 8-10 turbines can be placed on a quarter section (160 acres) of land. For the purposes of preliminary projections, the cooperative has set each producer-owned project at the scale of 2 MW (due to current state incentive program requirements), or approximately 2-3 turbines per section. Using the technologies identified above, a total investment of \$1.75M is estimated to be needed for each 2 MW project. The configuration, networking, and scale of the entire project will be influenced by bidding specifications of potential electricity buyers, transmission capacity in a given region, physical logistics of site proximity, and overall finance capability. These questions should all be addressed in feasibility analysis. For current planning purposes, the cooperative is operating under an assumption that the initial project will be approximately 10-12 MW in size, requiring total capital of \$10.5M.

Inasmuch as the investment required per 2 MW project is beyond the reach of the vast majority of individual landowners, some mechanism is required to secure investment and financing beyond that available to the individual landowner. An initial assessment of US wind farm operations has failed to identify any successful cooperative landowner ventures to date. Development of a business model for aggregating investment and securing financing is a necessary component to be addressed in feasibility analysis and business planning. This business model will need to be benchmarked against the current development model being used in existing projects.

The cooperative has initiated but not comprehensively identified relevant sources of public financing and incentives for wind power projects. Minnesota has mandates applicable to the state's major utility requiring purchase of renewably produced electricity, including wind power. The state also appears to have incentives applicable to wind power producers, and the just passed Federal Farm Bill contains several portions of new programs that appear relevant to assist potential developers of wind power. A comprehensive analysis of state and federal incentives is required to determine what sources of assistance might be available for the venture contemplated by Harvest Land. In addition, an analysis of relevant business structures and tax treatment is required to determine what business structure would be most appropriate for the venture.

Expansion of customer base: Harvest Land has contacted potential buyers of wind generated electricity. While no agreements have been reached, state mandates for the use of wind power have not yet been satisfied by the state's major utility, thus creating demand for the products of this project. Because of the way electricity is generated and sold, linking a specific source of power to a specific consumer usually is not possible. However, expansion of the cooperative's customer base can be viewed in three ways. First, the successful development of this project would allow the cooperative to enter into a power purchase agreement with a major utility or electricity distributor (as previously noted, Xcel Energy is under mandate to purchase an additional 400MW of wind power

by 2012), thus allowing a greater share of the state's total electrical power pool to come from renewable wind sources. In this situation, the cooperative's "market share" of electricity consumers is increased. Alternatively, because all of the wind power fits the definition of renewably produced power, the cooperative could choose to focus its sales and marketing efforts on electricity distributors serving "green power" consumers. In this context, virtually 100% of the power could in theory be linked to a specific customer base that "buys" the co-op's power. Third, creation of business relationships with a utility (such as through a power purchase agreement) increases the potential for the co-op to market its other goods and services to that utility and to the utility's customer base through other joint ventures and cross marketing efforts.

Increase in return to producers: The proposed business model to be examined calls for the creation of a business entity that would link individual landowners who have appropriate sites with an investment pool of capital created by the co-op and/or other co-op member investors. It has not yet been determined whether that investment pool would be created by the cooperative itself, or through individual investors who are members of the cooperative (and by definition, who are all active farmers), or a combination thereof. However, the purpose of the feasibility analysis and business planning effort would be to identify how to structure that pool such that the entire enterprise is 100% owned by independent producers, with a sharing of profit commensurate with risk and investment. Because the structure of the investment pool has not been identified, the impact on all participating producer investors cannot be determined at this time. Inasmuch as current development companies are receiving positive returns on current projects, it is reasonable to assume that producer investors in this venture could similarly experience positive increases in income commensurate with investment. (Whether that rate of return is competitive with other investment options available to producer investors is one of the items to be addressed in feasibility analysis and business planning). However, impacts to producers who have land suitable for development can be estimated based on typical returns to landowners who currently receive income through sale of wind rights to development companies. Using this approach, the cooperative has projected that each 2 MW project will increase net income per acre on a quarter section (160 acres) by \$75/acre (\$12,000 per year total) for years 1 thru 10 of the project. This is approximately two times the average net income per acre for crop enterprises. For year 11 forward of the project the net income increase per acre is substantial at \$245/acre (initial debt has been paid off). The amount of land consumed by the turbines is minimal, allowing the producer-owner to continue to farm the land.

Components of feasibility analysis: The proposed feasibility analysis will address the following components. It must be clearly noted here that the feasibility analysis and business planning efforts required here are not linear processes, but iterative cycles of devising, testing, and revising a design basis, a project business model, and a co-op business plan. Assumptions of each will affect the others, and the participation commitments of others will affect all. Substantial interaction of consultants (business, legal, and accounting), customers, and cooperative staff will be required in both feasibility analysis and business planning.

Issues related to physical siting and overall project layout: This section will address the number, location and quality of potential sites that are owned by members. Using readily available information about industry standard generation technology, the overall project concept will be developed, including technical requirements, comparison of the proposed design with existing operations, and potential environmental impacts and concerns.

Issues related to generation technology, connectivity, and transmission capacity: This section will review technical issues related to generation and transmission, and document the key generation technologies available for use, assess manufacturer support (including warranties and service) for their equipment, identify issues related to technological reliability, physical connection of individual sites to the local power grid, and assess transmission capacity from the identified sites to more distant demand sources. Transmission and distribution issues must be addressed cooperatively with a utility (preferably a utility committed to buying the power).

Issues related to market feasibility: This section will identify issues related to successfully securing a power purchase agreement from an electric utility or other buyer, including parameters of price, bidding procedures, minimum and maximum size of projects, etc.

Issues related to state/federal incentives, subsidies, and regulations: This section will analyze current state and federal programs related to production incentives, finance options/subsidies, and tax treatment; implications for appropriate business structures will be addressed here.

Issues related to capital needs, investment and finance: This section will identify total capital needs and relationships of debt to equity, identify sources of capital, and develop models relating the relative potential investments by the cooperative, landowner members (e.g. members whose land is suitable for siting turbines), and investments by other producer members, and project return on investment under a variety of scenarios. Financial proformas will be generated on a three year basis, including projected balance sheets, operating statements, and cash flows.

Issues of operation and management: This section will identify costs of operation, management needs, availability of required labor, and options for on-going servicing of developed sites.

Components of business planning: Following completion of the feasibility analysis, the applicant will assess the need/desirability to continue to business planning. Should the decision be to move forward, the business planning process will identify in detail how the proposed enterprise should be structured and implemented. Some of the key issues to address in business planning will include:

Business structure and investment model: Based on the analysis of tax treatment, state/federal incentives, and the desired investment model, key decisions will need to be

made regarding the appropriate structure (LLC, cooperative, C-corp, etc.) for the venture, and mechanisms for members to invest in the project.

Scale of operation: The proper scale of each generation site, the total number of sites, the technical issues regarding networking and connectivity, and the power purchase requirements of major buyers will need to be balanced to identify the total scale of the initial project, and the capability to expand operations in the future.

Capital needs: Based on the scale of operations, total capital needs can be identified. Sources of investment capital and finance options will need to be identified, along with plans for securing sufficient funds.

Negotiation of a power purchase agreement: Key to the continued development of the project will be to secure the power purchase agreement. Critical considerations in the negotiation of that agreement will need to be identified.

Qualifications of Those Doing the Studies

The conduct of the feasibility study and generation of the business plan would be contracted to Cooperative Development Services (CDS). CDS is a 17 year old non-profit corporation created and governed by the cooperative community of the Upper Midwest. The members of its board of directors represent three primary groups: trade associations representing cooperatives in Minnesota, Iowa and Wisconsin; rural electric cooperative business development staff; and the cooperative credit community (such as National Cooperative Bank Development Corporation, Cooperative Finance Corporation, Farm Credit Services, and Co Bank). CDS's mission is to support the development of successful new and existing cooperatives in all sectors of the economy. It carries out its work through a team of 7 employees, in addition to 17 independent consultants who conduct all of their consulting with cooperatives through CDS.

CDS staff and consultants have substantial experience in feasibility analysis. In the past year, staff and consultants conducted a major market feasibility analysis assessing the market feasibility and potential business entry strategies for a group of dairy producers in Iowa seeking to enter the value added organic dairy market. Similarly, it conducted a feasibility analysis for a rural electric cooperative client, assessing the feasibility of a cooperatively owned business incubator. On an annual basis, CDS carries out feasibility analyses or business planning for expansion, growth or relocation of approximately 15 food co-ops nationally.

CDS also has experience with business planning of large projects. In the past decade, CDS was instrumental in the major restructuring of a farm supply cooperative in Wisconsin. CDS assembled a financial, legal and management team that was able to preserve member equity, preserve the jobs of all co-op employees, pay off all creditors (with partial exception of a bank that had to write off a part of the loan). Similarly, CDS assisted with an employee buyout of a cheese production plant in Antigo, Wisconsin that was slated for closing. CDS's work kept the plant from closing, preserving all of the jobs

of the co-op and securing a market for regional milk producers. The employee-owned Antigo Cheese Company won a Manufacturer of the Year Award from Wisconsin Manufacturers & Commerce for “Community, Business & Employee Partnering” in 1999. The co-op currently employs over 75 people.

CDS has extensive experience handling large consulting projects. It currently manages a \$200,000 organic consumer education program on behalf of the Michigan Department of Agriculture. During the period 1996-2001, CDS oversaw a \$3 million business development and organic consumer education project in the Upper Midwest, funded principally by the Pew, Kellogg, and McKnight Foundations.

CDS also has specific experience with wind power projects. In 1997, CDS cooperated with the Minnesota Project to conduct a feasibility study of farmer owned wind power on three regions in Minnesota, funded by the McKnight Foundation. Given the status of the technology at the time, it was determined that none of the three projects were feasible. In 19XX, CDS conducted research on municipal generation of wind power, and published a booklet on the topic. CDS remains active in this sector, being currently engaged in discussions on wind projects in both Wisconsin and Iowa.

It is anticipated that if this project is awarded, that CDS consultants Ken Campbell and E.G. Nadeau would lead the project. Resumes are attached as appendices, and summarized below.

Ken Campbell has 13 years of extensive consulting and management experience in the electric utility, biomass energy, and alternative energy industries. Major relevant work includes serving as chief administrative officer and lead consultant on initial phases of a \$140 million 75 MW biomass energy project in western Minnesota, development of a demand-side management program for a municipal electric utility, and design and delivery of a neighborhood energy savings program, among a number of other utility related projects.

E.G. Nadeau has been a CDS staff member and consultant for 17 years. During that time he has conducted numerous feasibility and business planning projects on behalf of cooperative clients. Relevant energy related experience includes a study on the feasibility of farmer-owned wind power in three sites in Minnesota, and the writing of a guidebook on the development of wind energy by municipal electric utilities.

Aiding in the feasibility analysis and business planning efforts will be Harvest Land Cooperative’s legal counsel and outside accountant.

Reed Glawe:

Dale Carlson:

Project Leadership

A strong team representing the management of Harvest Land Cooperative will support feasibility analysis and business planning efforts. Mr. Dave Stuk will serve as the liaison with the lead consultant. The value of time spent by Harvest Land employees on this project will be captured by timesheet annotation, and used as in kind match for the project.

Mike Weelborg, General Manager: Mr. Weelborg is a native of South Dakota. He has managed Harvest Land Cooperative since 1965. During the nearly 37 years he has managed the co-op, sales have grown from \$900,000 to approximately \$80 million. Mr. Weelborg has been instrumental in the cooperative's efforts to diversify its operations and to create strategic alliances to promote the agricultural production activities of its patrons. Today, Harvest Land is one of the more profitable cooperatives in Minnesota. Prior to joining Harvest Land Cooperative, Mr. Weelborg managed the local elevator in Easton, Minnesota.

Gordy Jensen, Asst. General Manager: Mr. Jensen is a native of St. James, Minnesota. Mr. Jensen was hired by Harvest Land in 1982 as its office manager and in 1987 he was promoted to the assistant general manager position. Prior to joining Harvest Land, Mr. Jensen worked in the audit departments of Benson Quinn and Schuetzle, Carlson & Company.

Dave Stuk, Finance Division Head: Mr. Stuk was raised on a crop and livestock operation in Peck, Idaho. Mr. Stuk worked for various Farm Credit associations located throughout the Northwest and the Midwest. The majority of his positions were in management. In March of 1995, Mr. Stuk joined Harvest Land as its manager of the finance division. Currently, Mr. Stuk is responsible for all phases of the operation of the finance division, which includes, Harvest Land Financial, AgQuest Financial, AgQuest Insurance Agency and Harvest Land's business relationship with Northland Capital.

Sadie Reiners, Finance Division CFO: Ms. Reiners is a native of the state of Virginia and before coming to Harvest Land had worked for St. Paul Bank for Cooperatives for 17 years. Ms. Reiner's primary responsibility included all aspect of credit administration for her clients and was Vice President of Credit before leaving the bank and going into consultant business. Ms. Reiners joined Harvest Land in March of 2001 as the finance division CFO/CCO.

Kevin DeBerg, Grain Manager- Raised on a family farm at Henry, South Dakota. Attended a one-room country school then graduated from Watertown Senior High School. Attended South Dakota State University and graduated with a Bachelor of Science degree in Agricultural Economics. Was assistant crop production manager at Watertown Cooperative Elevator, Watertown, South Dakota. February of 1989 began employment with Harvest-Land Cooperative, Morgan, Minnesota and currently is grain manager. Also works with special projects involving feed mill operation and pricing,

insurance claims and rates, railroad freight and negotiations, and cooperative patron relations.

Sean Stocker, Senior Credit Manager: Mr. Stocker is a native of Randolph, New Jersey. He graduated with a Bachelor of Science degree in Electrical and Computer Engineering from the University of Colorado in December 1990. Mr. Stocker spent 8 years in the telecommunications industry providing both design and manufacture expertise. Mr. Stocker leveraged his sales, communication, problem solving and mathematical skills to pursue a career in finance. Mr. Stocker's finance career started at Harvest Land Financial as a credit officer from 1998 to 2000. Leaving Harvest Land due to family reasons, Mr. Stocker worked as a commercial credit officer in Colorado Springs, Colorado for 2 years broadening his experience and knowledge in finance. Mr. Stocker had a strong desire to return to agricultural lending and recently rejoined Harvest Land as its Senior Credit Officer. Mr. Stocker brings a diverse background with strong knowledge of electricity, engineering and finance to the project.

Harvest Land Cooperative has a proven track record in the development of business ventures that profitably leverage the skills and resources of the business and its patrons.

In 1987, Harvest Land, Inc. ("HLI") was formed. HLI is a C-Corp and is a wholly owned subsidiary of Harvest Land Cooperative. The primary purpose HLI was formed was to develop a vehicle to retain earnings within the company in order to build the equity base of Harvest Land Cooperative and create a vehicle that would ensure that equities to the patron could be retired on an equitable basis when the patrons retire.

Since 1987, Harvest Land has formed several successful ventures that are providing significant profitability to the Coop and its patrons. A business chart of the company is included in the appendices. Following is a brief description of each entity and the impact that it has had for the patrons of Harvest Land.

Turkey Division: Harvest Land started its turkey division in 1987. The turkey operation consists of eight barns on four sites where approximately 16,000,000 pounds of turkey are produced annually under contract with Willmar Poultry. Prior to construction of these four sites, Harvest Land facilitated the marketing of _____ other farmer owned facilities in the local area. The Turkey Division has generated approximately \$2,300,000 of net income since inception in addition to providing Harvest Land Cooperative with over \$2 million of feed sales annually.

Harvest Land Financial: Harvest Land Financial was formed in 1992 primarily as a vehicle to finance new integrated swine operations. Much like the turkey operation, Harvest Land was instrumental in procuring a strong marketing contract with Farmland and then getting a number of local farmers to invest in farrow to finish operations. However, at the beginning, the financing community was not supportive of the new system and therefore, Harvest Land decided to finance a number of start up operations themselves. As the finance company has grown, it has developed additional programs for the financing of contract finishing barns that has helped the smaller farmer stay in the

livestock business, as well as an innovative input crop-financing program for Harvest Land patrons. Besides being a successful entity that has generated in excess of \$4,055,000 in net income since its inception, the finance programs have also greatly assisted the cooperative in retaining and expanding feed and agronomy business. Currently Harvest Land Financial has \$47,000,000 in gross loan volume. Following is a brief outline of the business completed to date:

- Financed a number of farrow to finish operations totaling over 50,000 sows
- Financed well in excess of 150 contract finishing barns
- Have provided in excess of \$40,000,000 in crop input loans the past six years

Northland Capital: Until 1996, Harvest Land Financial only offered seasonal, intermediate and long-term loans. In 1996, Harvest Land added leasing to its product line when Harvest Land, Inc. joined with Northland Capital Group to form Northland Capital Financial Services, LLC (“Northland Capital”). Harvest Land provided the capital and the funding and Northland Capital Group provided the leasing expertise. The primary service is to provide leases for short line agricultural equipment. To date Northland has gross lease volume of \$45,000,000 and has leases in 47 states. Since its inception, Northland has generated over \$137,000,000 in lease volume. In earnings, Northland has generated in excess of \$2,100,000 in net income since its inception.

AgQuest Financial Services, LLC (“AgQuest”): Formed in 1999, AgQuest is a finance company that was is owned by local cooperatives and organized for the purpose of providing financial products and services to the patrons of its participating cooperatives. AgQuest is managed by Harvest Land Financial and currently has four members: Harvest Land Cooperative (Morgan), Co-op Country (Renville), Watonwan Farm Services (Truman) and New Vision (Worthington). Collectively, the annual sales of the cooperatives are approximately \$500 million in sales covering 23 counties in Southern and central Minnesota. In the last two years, AgQuest has approved in excess of \$34,000,000 in crop input loans to the patrons of these four cooperatives. As a fairly new company, AgQuest is currently operating at a breakeven, however, has been instrumental in expanding the agronomy sales of each cooperative.

The long-term focus is to continue to build stronger business relationships with other cooperatives in order to collectively provide the strongest products and services to the local patrons.

AgQuest Insurance Agency: AgQuest Insurance Agency was formed in 2000 as an additional service for the patrons of AgQuest’s patron members. In the last two years, the company has generated in excess of \$2.6 million in premium sales and \$200,000 of net income to Harvest Land. The program includes free mapping for each farmer who uses the insurance program as well as providing member cooperatives additional revenue for being part of the insurance program.

These businesses, individually and collectively, demonstrate a consistent track record of successful enterprise innovation, creation, and management within the leadership team of

Harvest Land Cooperative. This same team will bring its substantial experience and acumen to bear on the proposed wind power project.

Commitment

Harvest Land Cooperative is very committed to this project. First, management has assembled and committed a team of its top managers to be used in this project, on behalf of all 1083 members of the cooperative. The commitment of its paid management staff constitutes a substantial cash match for grant funds, with additional cash outlays committed as needed. Second, the cooperative has demonstrated its historic commitment to these types of projects through substantial upfront financial support: cumulatively Harvest Land Cooperative has an equity position of over \$5.3 million in the business ventures it has created since 1987. Based on the outcome of the proposed feasibility analysis and business plan, the cooperative stands prepared to make substantial investments in the proposed wind power project. However, until appropriate feasibility analysis and business planning have taken place, it is not reasonable to request further participation by individual producers. While an anticipated 5 or 6 specific landowners would be involved in providing sites for the project, all 1083 members will potentially have a stake in the project based on the cooperative's equity investment. Additional investment opportunities will likely be available to individual members as well.

The cooperative has already invested substantial time and effort in background research. As noted previously, Xcel Energy is under state mandate to purchase up to 400 MW of wind power by 2012. This amount is far in excess of the 10-12 MW of power being studied in this project. Because of this mandate, initial discussions between co-op staff and the utility have been very favorably received, though no commitments or agreements are in place.

Very initial contacts with officials of state government and USDA Rural Development have occurred. These contacts have helped create awareness of the project, though no extensive discussions have yet been held. The cooperative anticipates working with both of these entities in leveraging participation in state and federal grant/loan/tax incentive programs, such as the Business and Industry Loan Guarantee program, state Small Producer Incentive program, etc.

Work Plan/Budget

Successful implementation of the project will require steps as outlined below. For the purpose of budget estimates, the following billable rates are used for consultants: CDS consulting fees are estimated at \$120/hr. Legal and accounting consulting fees are estimated at \$200/hr. Values of co-op staff time are based on actual salaries and benefits. Cooperative management is approaching this study as a potential \$10.5 million project. Clearly a project of this undertaking requires substantial study and thorough understanding of the business and market issues involved in a new project in a new industry. Given substantial previous experience in the successful launch and development

of new businesses, management believes that the estimated time investment of its staff in this project is conservative, and that actual expenditure of time by co-op staff during the study process will actually be more than estimated. However, to the extent that staff are not required or able to provide the estimated amount of time budgeted for the project, the cooperative is prepared to make other cash investments in the project in order to provide required 1:1 match for federal funds expended.

Project fact finding- Members of the co-op's project team will visit wind operations and product vendors in Minnesota and other parts of the United States to observe operations, assess equipment and technology options, and identify attributes of successful project development. Team members participating: Weelborg, Stuk, DeBerg, and Stocker. Federal funds used for travel: \$5000. Co-op cash contribution for staff time: 10 days @ \$300/hr actual salaries and benefits, totaling \$24,000. Timeline: October 15- December 31, 2002.

Membership and board education- Since this project involves the potential investment of substantial co-op resources and the potential creation of an investment pool by co-op members, it is critical that co-op patrons and leaders be knowledgeable about wind power, and the potential investment opportunities and risks. Co-op board members and co-op patrons will be invited to tour wind farm sites, be briefed on the project in several local meetings, and given an opportunity to express interest/feedback regarding their potential interest in wind power investment and the structure of their investment. Team members participating: Weelborg, Jensen, Stuk, Reiners, Stocker. Co-op cash contribution for staff time: 5 days @ \$485/hr. actual salaries and benefits, totaling \$19,400. Timeline: December 1, 2002- June 30, 2003.

Marketing plan development- Co-op staff will identify potential power purchasers, meet with potential buyers (including investor owned utilities, rural electric, and others), and identify critical parameters related to the successful negotiation of a power purchase agreement. Team members participating: Stuk, Reiners, Stocker. Co-op cash contribution for staff time: 20 days @ \$165 actual salaries and benefits, totaling \$26,600. Timeline: December 1, 2002- June 30, 2003.

Feasibility Analysis- Conduct feasibility analysis as outlined on page X of this project description. CDS consultants: 760 hours @ \$120/hr, legal and accounting consultants: 80 hours @ \$200/hr. Total federal funds used for consultants: \$107,000. Co-op team members participating: Stuk, Jensen, Reiners: 130 hrs @ \$200/hr. DeBerg, Stocker: 200 hrs @ \$80/hr. Total cash match for actual salaries and benefits: \$42,000. Timeline: January 1-June 30, 2003.

Business Plan Development- Develop business plan using iterative method as described on page X of this application. Test scenarios, propose business structure and investment model, develop operations plan. CDS consultants: 200 hrs @ \$120/hr., legal and accounting consultants 60 hrs @ \$200/hr. Total federal funds used for consultants: \$36,000. Co-op team members participating: Stuk, Reiners, Jensen, Stocker. 150 hours

@ \$240/hr actual salaries and benefits. Total cash match for actual salaries and benefits: \$36,000. Timeline: July 1-Sept. 30, 2003.

Budget Summary:

Activity	Federal funds	Cash Match	Total
Fact finding	\$5000	\$24,000	\$29,000
Member education	0	\$19,400	\$19,400
Marketing plan	0	\$26,600	\$26,600
Feasibility analysis	\$107,000	\$42,000	\$149,000
Business planning	\$36,000	\$36,000	\$72,000
Totals	\$148,000	\$148,000	\$296,000

Amount Requested

The cooperative is seeking \$148,000 of federal funds for this project.

Project Cost per Producer that are Owners

The cooperative is requesting federal funds of \$148,000. Based on a co-op membership of 1083, this amounts to a per producer cost of \$136/producer.

Administrator Priority Points

This project is deserving of special consideration for two reasons.

First, the area served by this project is one of the poorest regions in Minnesota. Per capita income in counties served by the cooperative are substantially below the state average of \$31,935. For example, the per capita income of Pipestone and Lincoln Counties, where the initial wind projects are likely to be located, are \$24,866 and \$21,846 respectively. Other representative counties in the region and their per capita incomes are Redwood-\$25,207, Renville-\$24,505, Watonwan-\$23,075, Yellow Medicine- \$23,183, and Murray-\$23,844. If successful, this venture would increase producer income, and retain a higher percentage of that revenue in the region compared to the traditional wind power development model currently used. Given the impact of economic multipliers, this has powerful implications for economic development in this region.

Second, this proposed venture creates an innovative model for cooperative wind power development that would be replicable by cooperatives in other regions of the country. We are not aware of any other wind power projects developed using a cooperative model. In addition, if successful, this model could allow farm supply cooperatives to diversify their revenue streams at a time when many co-ops are threatened due to economic concentration and reduced numbers of producers and rural citizens. Successful model development through this project would also assist other communities and regions in making most effective use of new USDA programs supporting wind power development.

Verification of Matching Funds

Harvest Land Cooperative is a large and healthy business enterprise. At the close of the last full fiscal year on 8-31-01, Harvest Land Cooperative had a net margin from activities of over \$3 million, and cash on hand or in bank of over \$1.66 million. (Audited financial statement for fiscal year 2001 and a recent bank statement are attached as appendices). A letter certifying that matching funds will be available at the time grant funds are expected, and that match funds will be spent at the same rate as grant funds, is also included as an appendix.