

LOCALLY OWNED ENERGY PROJECTS
"FROM CONCEPTION TO COMPLETION"

Steps Involved

By

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INTRODUCTTON

I am pleased to be able to provide information and expertise to help further community based projects. Networking and consulting with fellow producers, government officials, and others is very rewarding.

I have been involved with project development since 1995, when a group of producers successfully built an ethanol plant in Luverne, Minnesota. I served as chairman during this venture. Since then I have worked with groups and participated in speaking engagements all across the United States and Canada. I have testified on the need for producer ownership of facilities in several state and national legislative meetings.

My experience is mostly tied to the ethanol industry, but I also work closely with the wind developers and soy oil processors.

The goal of this presentation is to educate the conference attendees on how to proceed and it is my intention to lay out the steps necessary to go from "Conception to Completion".

For Further Information you are welcome to contact me:

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STEPS INVOLVED from CONCEPTION TO COMPLETION
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There is no crystal clear path that works for all projects, but most follow a general outline.

Step

1. Project Idea
2. Form a Steering Committee
3. Develop a Mission Statement
4. Select Leaders (Interim Board of Directors)
5. Consider a Consultant
6. Raise the Seed Money
7. Research and visit similar projects
8. Apply for grants
9. Contact builders/contractors if needed
10. Choose a person or entity to do an independent feasibility study
11. Feasibility Study
12. Set realistic goals and a timeline
13. Select a Legal Firm
14. Form Entity/Structure/Governance and etc.
15. Write a Business Plan
16. Prepare Offering Circular
17. Organize Equity Drive/Stock Offering
 - A. Advertising
 - B. Banker Meetings
 - C. Key Player Meetings
 - D. Equity Meetings
18. Financing
 - A. Equity Needed
 - B. Identify Lenders
 - C. USDA Loan Guarantee
19. Permitting
20. Site Location (May need to identify earlier for business plan)
21. Sign Design/Build Contract
22. Hire a General Manager
23. Sign Marketing Agreements
24. Construction Oversight
25. Utilities Agreements
26. Write Employee Policy Handbook
27. Hire Employees
28. Train Employees
29. State Production
30. Hold Annual Meeting

Different projects will demand change in order of these steps. These steps are only to serve as a guide. Some projects are much more involved and will have several more steps.

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FEASIBILITY STUDY

The feasibility study is the most critical document, which will determine if the project will proceed. This study needs to be done early on in the project, which unfortunately comes at a time when most projects have the least amount of money. This is where the "Value Added Development Grants" are of significant value to the project. The trade off is that there is no certainty of being awarded the grant and that it slows down the project. I believe that grants are nice, but that the projects should be good enough to proceed with or without grants.

The feasibility study needs to be done by an independent qualified person or entity experienced in the industry. Choosing the right person or entity is critical. This is an expanding field and studies are being done in a wide range of costs and creditability. References or networking with similar projects is almost essential before hiring a feasibility firm.

FEASIBILITY OUTLINE*

- A. Summary
- B. Table of Contents
- C. Summary of the Important Findings and Recommendations:
 - 1. Setting, purpose and description of project
 - 2. Summary of market potential and source of input supply
 - 3. Summary of Technical Features
 - 4. Schedules of Net Benefits and Capital Requirements
 - 5. Benefit-Cost Ratios and Internal Rate of Return
 - 6. Summary of Benefits and Costs Associated with the Project
 - 7. Proposed Financial Plan and Projected Cash Flows
 - 8. Recommendations for Implementation
- D. Description of the Project:
 - 1. Nature of the Project (including technical processes, general size and location, kind of output, kinds of input, time horizon, etc.)
 - 2. The General Setting of the Project location
 - 3. Proposed Ownership, Structure and Management
 - 4. Markets to be served and Existing Suppliers
 - 5. Input Supplies and Competitive Users
 - 6. Staffing Requirements and Sources
- E. General Setting and Need for Project:
 - 1. Physical, Economic, and Social Characteristics (members/community) of the Project area
 - 2. Regional, National, and International Economic Relevance to Project
 - 3. Relevant Governmental Policies and Programs
 - 4. Description of the Problem Situation (which would be solved by the project)
 - 5. Impact and Consequences on Members (and the community if needed)
 - 6. Sampling Procedures and Survey Techniques Used to Support Project
 - 7. Relevant current competitors
- F. Market Potential for Goods or Services, Markets Served (current and future):
 - 1. Form and Quality of Product or Service, Markets Served and Channels Used
 - 2. Projected Total Demand in Markets to be Served
 - 3. Projected Competitive Supplies and Services
 - 4. Sales Potential and Projected Sales Prices
 - 5. Marketing Plan and Projected Marketing Costs

- G. Raw Material Supply Potential and Procurement Plan:
 - 1. Form and Quality of Materials Required and Potential Supply Sources
 - 2. Projected Total Supply from Members and Non-members
 - 3. Projected Competitive Demand
 - 4. Procurement Potential and Projected Procurement Prices
 - 5. Procurement Plant and Projected Procurement Costs
 - 6. Form of Commitment of Raw Materials-Marketing Agreements, Etc.
- H. Supply of Labor and Other Key Inputs:
 - 1. Form and Quality of Labor and Other Inputs Required
 - 2. Projected Total Supply from Sources Planned
 - 3. Projected Competitive Demand for Inputs
 - 4. Acquisition Plan, Training Program and Projected Acquisition Costs
- I. Technical Characteristics and Specifications:
 - 1. General Design and Technical Requirements
 - 2. Comparison of Design and Expected Performance with Existing Operations
 - 3. Reasons for the Advantages of the Design Selected
 - 4. Proposed Sources of Supply and Method of Acquisition
 - 5. Proposed Procedures for Quality Control and Construction Performance
 - 6. Estimated Costs, and Sources Upon Which Estimates Are Based
 - 7. Alternative processes, production methods and levels
- J. Development Schedule and Production Plan:
 - 1. Sequence of Development and Construction; Critical Points in Sequence
 - 2. Detailed Development and Construction Calendar
 - 3. Procedures for Controlling Development Schedule
 - 4. Production Start-up and Initial Performance (or Yields)
 - 5. Schedule of Transition to Full Output and Controls to Insure that Schedule will be met
 - 6. Schedules of Input and Output Based on Development and Production Plans
- K. Capital Requirements and Investment Schedule:
 - 1. Estimated Capital Cost for Major Facilities and Equipment
 - 2. Estimated Capital Cost for Marketing and Other related Facilities
 - 3. Replacement Schedules for Equipment and Facilities
 - 4. Estimated Working Capital Requirements
 - 5. Schedule of Estimated Total Capital Investment
- L. Sales Plan and Revenue Schedule:
 - 1. Seasonal Patterns of Product Demand and Prices
 - 2. Storage Program and Projected Monthly Sales Schedule
 - 3. Projected Net Monthly Product Prices
 - 4. Projected Revenue Schedule over the Project Planning Period
 - 5. Pooling Arrangements
- M. Projected Operating Costs and Net Revenue:
 - 1. Raw Material Costs
 - 2. Labor Costs
 - 3. Costs for Other Inputs
 - 4. Management and Related Costs
 - 5. Repair and Maintenance Costs
 - 6. Costs for Research and Development, Overhead and Other Service Functions
 - 7. Combined Annual Operating Costs
 - 8. Projected Net Revenue over the Planning Period

- N. Schedule of Net Benefits - Partial Budget
 - 1. Schedule of Added Net Income From Project
 - 2. Schedule of Net Revenue Replaced by Project (if a Renovation Project)
 - 3. Schedule of Combined Total Net Benefits from Project
- O. Economic Feasibility of Project:
 - 1. Present Value of Investment and Net Benefits Schedules at Alternative Discount Rates
 - 2. Benefit-Cost Ratios and Internal Rate of Return for Project
 - 3. Sources and Schedule of Benefits Associated with the Project
 - 4. Sources and Schedule of Costs Associated with the Project
 - 5. Present Value of the Combined Schedules of Associated Benefits and Costs
 - 6. Project Potential in Relation to the Opportunity Cost of Capital, and Summary of Economic Feasibility
 - 7. Sensitivity Tests-What if Prices and Costs Changed by Various Amounts
 - 8. Other Financial Ratios as Needed by Project
- P. Financial Plan for Project
 - 1. Proposed Equity Investment by Source of Funds
 - 2. Proposed Sources, Schedule and Terms of Loans for Meeting Balance of Capital Requirements
 - 3. Projected Cash Flow by Sector under Proposed Financing Plan
 - 4. Projected Schedules of Depreciation, Interest and Taxes
 - 5. Pro forma Balance Sheets and Operating Statements (3 years)
 - 6. Pooling Arrangements
 - 7. Pro forma Source and Application of Funds
 - 8. Summary of Financial Plan and Recommendation for Implementation
 - 8. Impacts on Members: Impact on the Cooperative
 - 9. Comparison with appropriate financial ratios and industry standards such as Dun & Bradstreet or Robert Morris Associates. Deviations from the norm will be accompanied by a narrative analysis of the differences.
- Q. Appendices and Notes:
 - 1. Resume or credentials of person or company who completed the study
 - 2. List key assumptions and validations for their use.
 - 3. List footnoted sources for the document
- R. Management requirements for the project
 - 1. Recommended organizational structure
 - 2. Listing of key management personnel with skill requirements and labor considerations
 - 3. Professional resources and specifications such as accounting, legal, employment and engineering

*Credit USDA Qwnes Matson and Joe Folsom)

BUSINESS PLAN

The Business Plan is both an operational and a strategic planning document it can also serve as a sales tool to investors, lenders and suppliers.

Summary [1-10 pages, further summarized into a 30-second sales speech]

- The Business
- The Industry
- The Markets
- The Operations
- The Project
- The Financials

Table of Contents

The Business

Business description and history

Products and services

- Product and services description
- Relative importance of each product or service
- Product evaluation
- Competitor comparison (competitive advantage - uniqueness)
- Demand elasticity
- Special features that appeal to customers.
- Risks and problems (e.g.- market acceptance, competition, manufacturing risk, financing risk, dependence upon few suppliers, distribution network, product liability, control by key personnel, ownership of intellectual property rights, regulatory issues, confidentiality agreements, life insurance, loans to and from owners, delinquent taxes, liens, judgments, litigation, credit reports, etc.)

Time and Space

- Location and space analysis and future needs
- Business hours and days open
- Accessibility, lighting, transportation

Ownership and management

- Business form (e.g. proprietorship, partnership, C Corporation, LLC, LLP, cooperative, nonprofit, subchapter S corporation, public body)
- Ownership, including parent, affiliates and subsidiaries
- Names, addresses and business affiliations of principal owners
- Organizational structure
- Supervisory personnel and responsibilities
- Names of board of directors and area of expertise.

Technology

- Technical stage of Product development
- Patent or copyright position, licenses and proprietary interests
- New technologies that may become competitive in next five years
- Regulatory or approval requirements and status
- Research and development efforts

The Industry

- Describe the industry, industry outlook, and sources
- Principal markets (commercial, consumer, and government, international)
- Current market size and 10-year growth potential
- Social, economic, technological and regulatory trends in the industry
- Publications and information resources available on this industry

The Markets

Marketing plan

- Entry and growth opportunities
- Strategy and analysis
- Share and capacity

Competition

- Five biggest direct competitors and their growth trends, advertising strategy, pricing techniques, operations, strengths and weaknesses, product differences
- Competitive advantages
- Possibility of working with partners or even competitors; on the project

Customers

- Current and prospective customers, names, locations, age, sex, income/educational level and residence, likes, dislikes expectations, products sold to each, percent of volume, contracts, buying habits)
- How will firm identify prospective customers
- Customer services

Advertising and promotion

- Image and public relations
- Pricing/quality matrix, policy
- Product promotion, penetration, product support
- Sales terms, number of salespersons, contacts, timeline
- Market growth trend, demographic shifts
- Franchise assistance

The Operations

- Operating procedures and policies
- Salaries, wages, payroll and other compensation (stock options, bonuses, profit sharing, health and retirement benefits, etc.)
- Number of employees by department, unionization, stability (seasonality)
- Capacity of production facilities (owned or leased, size and location, volume and unit capacity, expansion capabilities; capital equipment needs)
- Suppliers, names and locations

- Terms of sales
- Cost breakdown of material, labor, overhead for each product
- Cost vs. volumes for each product
- Block and workflow diagrams of manufacturing process
- Schedule of work for next two years
- Contracts: amounts, duration and conditions; subcontractors
- Operating advantages of the company
- Risk Analysis and insurance needs
- Business goals, including exit strategy and harvest potential

The Project

- The project description and objectives
- Cost and sources of funds
- Debt or equity financing (stock issued and authorized); options and warrants
- Property analysis (environmental concerns, wetlands, flood plains, farmland, historical/ archeological site, zoning, hazardous substances and permits, future development, transportation and utility capacity)
- Legal Requirements
- Community impact including job creation
- Construction issues: management, contracts, timeline, design, warranties, payment,
- Startup
- Cost/benefit analysis, (internal) rate of return analysis
- Energy and utility requirements

The Financials

- **Historical financial statements** (three years of year-end)
- **Current financial statements** (less than 60 days old)
- **Financial statement projections** for next three years, including balance sheets, income statements (including a listing of operating expenses), and cash flow statements

Note: The projections should be monthly the first year, and quarterly or fiscal-year-end the second two. The statements should preferably be done in accordance with generally accepted accounting principles (GAAP), e.g. list current maturities of long-term debt as a current liability (reducing principal accordingly under long-term liabilities), assets valued at the lower of cost or market value, costs booked when incurred and sales booked when sold even if not delivered, etc. The date of the run and the date of the statement period should be stated at the top of each page.
- **Assumptions** for financial projections, such as whether they are the mostly likely/best case/worst case scenarios, terms for accounts receivable, inflation rate, sales growth rate, dividend policy, capitalization, tax rates, margins, profits, durability, breakeven levels, positive cash flow, costs, budgeting accuracy, seasonal cash requirements (e.g. line of credit), public offerings, future values, future financing needs, loan interest rate assumptions, etc.
- **Industry comparison** (e.g. Robert Morris Associates) and spreadsheet, analyzing reasons for large differences in ratios and outcomes.
- **Aging of accounts receivable and payable**

Supporting Documents

- Resumes (specialized education, training, experience, and professional affiliations) of key employees and owners

- Tax returns of guarantors or owners for last three years
- Personal financial statements of guarantors or owners
- Franchise contract and supporting documents
- Leases
- Purchase agreements
- Licenses and other legal documents
- Articles of Incorporation and bylaws
- Letters of intent from or contracts with suppliers
- Appraisals
- Capital equipment list showing cost and book values
- Feasibility studies
- Advisors names and addresses: attorney, accountant, board members, investors, lenders, underwriters and other consultants
- Offering documents or prospectus

LENDER'S ANALYSIS

If the loan will be made to a business whose income is dependent upon an operating company (e.g. a limited liability real estate holding company leasing land and buildings to a retail or manufacturing company), both businesses must be evaluated in a similar manner.

Business Plan or Feasibility Study

Economic, market, technical, financial, management feasibility.

Financial Information

- Balance sheets and income statements for the three previous years (for existing businesses)
- Pro forma balance sheet at startup in accordance with generally accepted accounting principles
- Two years (three full years preferred) projected year-end balance sheets and income statements
- Tax returns for individuals on sole proprietorships
- Personal financial statements

Spreadsheets

Spreadsheets in common size form (balance sheet items expressed as a percentage of assets and income and expense items as a percentage of sales) with appropriate ratios (e.g. current ratio, quick ratio, days accounts receivable ratio, days inventory ratio, debt-to-worth ratio, times-interest-earned. ratio, debt service coverage ratio, return-on-sales ratio, return-on-assets, return-on-equity ratio) and comparisons with industry standards (such as Dun & Bradstreet or Robert Morris Associates) for similar size businesses.

Written Analysis

A narrative discussing repayment ability, including a cash-flow analysis, history of debt repayment, necessity of any debt refinancing, primary and secondary sources of repayment

Equity: existing businesses must have a minimum of 10% tangible balance sheet equity; new businesses (those without at least one recent fall year of profitability without extraordinary items) must have a minimum of 20%). A written trend analysis of financial statements, which compares and discusses borrower's year-to-year historical financial information and trends.

Realism of financial projections. Has past performance matched projections?

Management

- Management's ability, experience and education
- Management team and succession plans
- Credit report on personal guarantors
- Character and owner information
- Previous credit experience with lender
- Liens and judgments

- Personal financial statement composition, income and cash flow

Collateral

- Description
- Value
- Source
- Liens
- Discounts
- Adequacy
- Quality

History

- Business history and profile
- Bank history (present line) and Risk rating
- Beacon score and Company Paydex or Dun & Bradstreet
- Credit report of borrower, its principals, and any parent, affiliate, or Subsidiary

Current Proposal

- Sources and uses of funds
- Competition
- Impact of project on community, employment, economics, and environment
- Summary of lender's most recent visit
- Lender's servicing plan

Summary of Strengths and Weaknesses

Recommendations

New Generation Cooperatives* (NGC)

Lessons Learned:

Combined with "other marketing strategies," a "prudent farmer-member investment" in an NGC "processing/marketing Venture" can provide a hedge against low and fluctuating farm commodity prices.

1. "Other marketing strategies" may include a) selling grain at the elevator, on a futures contract or through an on-farm livestock operation; b) selling livestock at a sales barn, stock yard, or on contract with other packers or processors.
2. "A Prudent Farmer-member Investment" in an NGC:
 - a. varies in its limitations, depending ON the size and financial condition of the individual farmer-member's operation;
 - b. approaches the stock purchase as an integral part of the farm operation;
 - c. includes contracting a portion of the member's annual crop for delivery. The portion should be significant but should allow for delivery at a reduced price if necessary.
3. An NGC "Processing/marketing venture" may market member:
 - a. crops through an oilseed crushing plant, flourmill, corn milling facility or a livestock production facility;
 - b. livestock or livestock products through a slaughter, packing or processing facility and/or product marketing program.

Some farmers believe low farm crop and livestock prices present a serious challenge to the survival of family farms and threaten the fabric of rural Minnesota. They feel that if farmers pursue vertical integration, they may benefit during periods when the margin for the production of farm commodities is too low to sustain profitable farm operation.

Examples of this concept are thriving in states like North Dakota, South Dakota and Minnesota. These NGC operations include three major sugar beet processors, wheat flour and pasta milling plants, over a dozen wet and dry corn milling plants, egg laying operations, fish farms, and hog breeding and feeding facilities.

Many farmers acknowledge the risk involved in these investments but feel it is riskier to wait for state or federal policy to establish parity prices. They do not trust that agribusiness processors and marketers will offer consistently higher prices in exchange for signed contracts or specific production practices.

Ethanol prices, for instance, generally follow the price of gasoline, not other agricultural commodities. This tends to reduce the negative impact of farm price peaks and valleys.

Co-ops have been successful in raising considerable equity capital for plant financing. Processing initiatives can be a safe and effective investment, depending upon the structure of the co-op and the discipline exercised by members.

A prudent investment of cash and crop by NGC members can provide staying power that will help the co-op and its members survive fluctuations in commodity and processed product prices.

If a farmer becomes over invested in any one market, it may become a speculative strategy where price fluctuations cause serious financial damage to the farmer and the co-op. To survive, farmers may have to diversify their investment portfolio. Selling crops and livestock through ~, combination of conventional markets and NGC processing/marketing facilities may be the most effective approach.

An ideal design for a NGC project may include:

1. All equity raised & crop supplied by farmer-members.
2. All members commit a "prudent" percentage of their annual crop.
3. Members hold all voting **STOCK** and board positions.
4. Board members are well informed and committed to serving the interests of farmer members.
5. Managers have the skill, experience and authority to do their jobs but answer to, and work strictly for, the board.
6. The board controls all financial matters, including investment options and the distribution of assets.

NGC developers should spread the investment risk and the burden of crop delivery among hundreds (or thousands) of farmers, depending on the size of the facility and the financial condition of the members.

Stock splits can be a pleasant result of successful NGC operation but often require the delivery of additional bushels. Unless new members buy in, a member's entire crop may be committed for delivery **to** the NGC. Any subsequent increase in crop prices, or decrease in product prices may expose members and the NGC **to** serious financial loss.

Strong local leadership (preferably by farmer members) is crucial to sell stock and **to** hold the program together.

Although a 521 co-op has its advantages, other forms of business structures can be effective. Grower Board members must be knowledgeable, dedicated to serving grower-members and in firm control of management.

MDA Contact

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SUMMARY

When doing Producer Owned Projects keep in mind several things:

CONTROL
MARKETS
FEASIBILITY
MANAGEMENT
LOCATION
GOVERNANCE
EQUITY RAISED (%)
FINANCING
TAX ISSUES
EQUITY DISTRIBUTION TO MEMBERS
EMOTION VS ECONOMICS
CO-OP CANNIBALISM