

Los Alamos Cooperative Market
Sustainability Study
November 2010



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Scope of Work

The Los Alamos Cooperative Market (LACM) commissioned Village Green Builders, Inc, d.b.a. “EcoBuild Systems, LLC” to conduct a study of its sustainability strategy to leverage the biggest impact with limited funds and maximize public relations. The intent of this study is to assess the current situation, identify best practices, prioritize recommendations, and provide a sustainability roadmap for LACM over the next decade.

Assessment

Current

Implementing a sustainability strategy at the current stage of construction, when design and mechanical decisions have already been made, is typically a daunting challenge. However, the stakeholders have made many wise decisions that help to frame the overall picture. Some design decisions cannot be reversed at this stage, but many sustainable features can be implemented throughout the life cycle of the business to enhance the triple bottom line (planet, people, and profit). These features can be added for little or no cost and will have a significant impact in terms of public relations.

Potential Costs

Hard

Hard construction costs depend on the direction the Board decides to take towards reaching sustainability goals. Many sustainable features are dependent not upon capital resources but upon efforts of the staff, members and volunteers (for example, the community garden). Energy systems can be very costly and have a long payback period. An aggressive approach toward sustainability could push the budget well beyond the current allocations.

Soft

A modest expenditure on soft costs, specifically for the purpose of grant writing, could leverage the sustainability budget from \$30,000 to \$50,000+. Furthermore, this is a PR story in and of itself.

Public Relations

Why is PR important? Communities look at cooperative groceries as more than just a grocery store, and LACM is no exception. The members have expended considerable time and resources to create a business that educates and inspires. The business is not made up of one story, but rather consists of a multitude of stories, and PR tells that story in a strategic way. This not only galvanizes the support of existing members, but engages new members. Without this sense of community ownership, the coop is just another grocery store.

PR is also a cost-effective method of marketing. Advertising will no doubt be required, but a story in a local paper engages the reader more than a quarter page ad. A well-planned PR campaign will:

- reduce the need for advertising, resulting in considerable savings for LACM's marketing budget,
- generate pride and ownership, thereby nurturing membership, and
- provide for the long term survival of the business.

What stories do we have now?

- LACM was founded and funded without a single dollar from the bank, entirely by its members through peer-to-peer lending. This is a model for other socially responsible businesses.
- LACM is situated on both bike pathways and a public transportation stop, reducing the carbon footprint of the store.
- The coop is creating 19 local jobs with benefits, further enriching the community. Furthermore, the coop plans to purchase a significant percentage of food and merchandise from local suppliers, providing a retail outlet for local small businesses and effectively incubating other businesses.
- This study: LACM has developed a sustainability strategy, incorporating countless methods to provide for the long term vitality of the business, enriching the community, and reducing the carbon footprint for both the business and its members.
- Miscellaneous: LED and fluorescent lighting, planned 2900 gallon water catchment system, planned community garden.

What story do we want?

- LACM is MUCH MORE than a grocery store: it is a place to learn, share your gifts, and be inspired about where you live, how you live, and your effect on the planet.
- Almost every decision the store makes is within the framework of a unified sustainability strategy.
- LACM envisions its role as a conduit for community enrichment through volunteer opportunities, mentoring, micro-finance, support of the arts, business incubation.

- Sustainability is much more than throwing a couple of solar panels on the roof. LACM wants to serve as a model of sustainability through innovative decentralized thinking- creating energy, creating jobs, creating food that its members buy and eat.
- Create a system for continued expansion and improvement of the Sustainability Strategy, making adjustments, embracing new technologies, leveraging the strengths of the members to make LACM profitable and always looking for ways to reduce the carbon footprint.

Funding

LACM

The Board of Directors has authorized roughly \$30,000 devoted to sustainability. As construction is approaching finish stage, this budget is vulnerable to possible encroachment. Therefore it is vital to secure the commitment of this budget as well as search for additional funding from both outside sources as well as the Los Alamos community at large.

Potential Outside Funding Sources

Federal

- USDA/REAP
- U.S. Department of Energy

State

- New Mexico Department of Tourism

Local

- Los Alamos Research Park
- Los Alamos National Laboratory
- Los Alamos Main Street
- Los Alamos Chamber of Commerce

Private

- Slow Money Alliance¹.
- Corporate sponsorship for green technologies. Create different levels of sponsorship, with benefits and exposure going to those with the highest financial or strategic contribution.
- Community Art Project on the cut tuff bordering the parking lot.
- Other community sponsorship opportunities: park benches, outdoor shower, public transit shelter.

¹ <http://www.dailyfinance.com/story/investing/slow-money-alliance-seeks-to-save-the-world-one-organic-rutabaga/19515455/>

Recommendations

Fundraising

1. Pursue grants: federal, state, and local
2. Pursue corporate sponsorship opportunities: technology partners, local partners
3. Continue to provide means for fundraising and socially responsible investing through website, seminars, bulletin boards or other method. Provide continuity in this endeavor so that members will know where to look when they are interested in socially responsible investing.

Green Building

1. Water Conservation: maximize use of 80,000+ gallons rainwater catchment annually.
 - a. Rainwater harvesting: install rainwater catchment on southwest wall, use to flush toilets.
 - b. Install low flow water fixtures, explore waterless urinals.
 - c. Use greywater recycling and rainwater to irrigate community garden.
 - d. Storm water runoff from the parking lot will be diverted to a detention pond. The velocity has the potential to be very strong, but some sort of bio-filtration should be considered around the detention pond to remove as many contaminants as possible before re-entering the local ecosystem.
 - e. Drip pan for produce sprayer, consider end-use of ice and all other water resources.
2. Energy production:
 - a. Solar/wind: explore grants, commercial leasing and other means to finance a renewable energy project. Due to the intensive energy usage of the refrigeration equipment, a 100% energy offset is economically unfeasible at this time. However, a leasing program could effectively lock in a monthly utility rate and offset carbon emissions.
 - b. Pyrolysis/gasification: explore potential to produce energy through gasification.
3. Reduce energy consumption
 - a. Use community hydroponic garden on west wall for passive shading.
 - b. Install LED lighting in exterior and compact fluorescents/ LED lighting on interior.
 - c. Daylighting: highly efficient skylights can offset the use of interior lights significantly, and project finance is available for even small scale commercial retrofit projects. The payback period is 1-2 years.
 - d. Efficient HVAC: decisions regarding mechanical systems have already been made, with a life expectancy of 10-15 years. A plan should be in place within 7-10 years to replace these units with highly efficient absorptive and evaporative cooling systems powered by renewable energy.
 - e. Set company policy for thermostat regulation.

- f. Heat or pre-heat water through rooftop solar system.
4. Air Quality
- a. Use low V.O.C. paints and finishes.
 - b. The main entrance/exit will be a source of dust and pollutants. While it will be too late to install an automatic dust collection system, it is not too late to implement a policy to clean mats daily.
 - c. Create a vertical hydroponic garden on the north wall adjacent to the café seating area.

Waste

1. Institute a purchasing protocol program that reviews and analyzes all store purchases to minimize future waste stream (for example, eliminating cellophane wrappers for disposable utensils, or choosing refillable pens over disposable pens).
2. Recycle 100% of LACM's internal waste.
3. No plastic bags.
4. Be a part of a taskforce to create a demand for recycled crushed glass, possibly through Los Alamos Research Park. As it stands, there is an oversupply of recycled glass, resulting in no opportunity to recycle glass.
5. Create a drop-off point for recycling to help others recycle, including a Goodwill or Salvation Army bin.
6. Create monthly members' trash to treasure/community garage sale.
7. Compost all organic waste from the café into the community garden.
8. Institute a reward program for in-store recycling (for example, coffee discounts for reusable mugs, water discounts for recycling water jugs).

Food Production

1. Announce plans for a community garden to be incorporated into landscape design and implemented in Year 1. Involve local permaculture experts to incorporate sustainable designs including aquaculture, beekeeping, irrigation utilizing rainwater and greywater, etc. Volunteers receive discounts.
2. Source as much produce and merchandise from local vendors as possible, with a goal of 30-40% over the next 2-3 years.
3. Use community garden to source lettuce, herbs, and other produce.
4. Incorporate aquaponics to provide the most intensive food production, water conservation, and highest nutritional yield per acre.

Education/Public Relations/Marketing

1. Nurture media relations with local, state, and national media through a planned strategy that highlights an aspect of LACM commitments every month (for example, April is Rainwater Harvesting month).
2. Continue to provide updates and stories to local media to create a mindset that LACM can always be depended upon to provide sustainability content.
3. Provide a consistent message, underlying the fact that these tactics fit within the underlying principles of LACM sustainability.

4. Incentive programs for both staff and members, whereby a discount, prime parking place or other carrot is awarded for a pattern of sustainable habits such as busing, bicycling, volunteering, recycling,...

Transportations & Pathways

1. Work with local transportation officials to create a bus-stop on NM 502 directly in front of LACM. Pursue state and federal grants to implement.
2. The bus-stop should have a shelter, cart corral, recycling bins, stairs and ADA-compliant ramp to access the store. Create an outdoor solar shower, for use by bicyclists or community garden volunteers, with a member key-swipe locking mechanism on the door.
3. Create an organized carpooling system for employees.
4. Consider making LACM a carpooling pick-up/drop-off point.

Community

1. Community blackboard providing opportunities for volunteering, mentoring, and socially responsible investing. Keep the blackboard uncluttered and dedicate a separate area for business cards and local announcements. Mirror the blackboard on the LACM website.
2. Regularly scheduled sustainability workshops, bringing in corporate and local sponsors to conduct some of those workshops. For example, a compost barrel manufacturer donates equipment to LACM and hosts a workshop for members, hopefully generating sales for that corporate partner.
3. Create programs to benefit those less fortunate, such as meals-on-wheels, donation options to provide low-income homes with weekly healthy alternatives.
4. Provide staff to assist elderly and disabled with carrying groceries.
5. Mural Project: support the arts through conversion of the cut tuff on the southern side of the parking lot. Prime the tuff to provide a canvas for a local arts competition. Sell 5 foot segments, sold to patrons for \$2,000 and having a plaque honoring the benefactors. Sponsor a competition or solicitation of artists, with a \$1,500 prize. This public arts project will create a tourist destination as well as nurture local artists.
6. Consider implementing a member carbon tracking system, where each UPC has a carbon point system associated with it and these points are tracked by member. Highlight the habits of the lowest scoring member in each newsletter, offering a \$50 coupon for members that purchased at least \$500 in a month and had the lowest carbon score.

Recommendation Overview

Item	Current Status	Goals
Energy Consumption	<ul style="list-style-type: none"> R-20 effective wall insulation High albedo (reflectivity) roof Energy Star appliances specified. 	Address: <ol style="list-style-type: none"> Passive solar/shading Lighting HVAC Hot water Refrigeration Thermal envelope
Energy Production	<ul style="list-style-type: none"> Snow load issues in roof support Planned PV system over loading dock roof 	<ol style="list-style-type: none"> Supplement budget through grants or Project finance to offset 70% through alternative energy
Water	<ul style="list-style-type: none"> Rainwater Catchment System 2900 gal. SE corner Phase II: additional rainwater storage on SW corner Potential annual capture: 80-85,000 gallons 	<ol style="list-style-type: none"> Use to flush toilets Use for outdoor showers and integrated aquaculture system feeding into raised beds Greywater recycling for crop production
Food Production	<ul style="list-style-type: none"> Majority of food is non-local (Denver, SF) Tie into La Montanita's buying group 	<ol style="list-style-type: none"> Increase local purchases to 30-40% On-site production 5% Carbon-track the UPC's and offer that info to consumers Honey production
Waste	<ul style="list-style-type: none"> Recycling bins (2) 100% recycling of cardboard & paper 100% compost recycled (food scraps) Partnership w/horse stables "No plastic bag" policy 	<ol style="list-style-type: none"> By 2012, 100% of waste recycled Drop-off point for member recycling Find end-use for glass recycling
Transportation/ Pathways	<ul style="list-style-type: none"> Canyon rim trail Bus stop Bike rack Cycling infrastructure 	<ol style="list-style-type: none"> Move bus stop closer, w/shelter and cart corral Ensure ADA compliance Install free outdoor shower for cyclists Carpooling (employees) Incentive Program for cycling or public transit.
Micro-finance	<ul style="list-style-type: none"> Grass roots fundraising history Developer driven funding 	<ol style="list-style-type: none"> Raise \$200k in financing Incubate other businesses Serve as P2P pipeline Partner w/LMC Create framework for incubation Debt reduction Explore Credit Union
Community: "more than a grocery store"	<ul style="list-style-type: none"> Already strong commitment Volunteers Education/outreach 	<ol style="list-style-type: none"> Meals on wheels Low income options Sustainability Workshops Volunteers = discounts Mentoring Board Art Mosaics/patrons

What are the Next Steps?

This study only serves as a framework for LACM's sustainability strategy. The decision on how to proceed is ultimately up to the Board of Directors. This study does not address itemized costs, prioritization of sustainability features, or potential funding from outside sources. These items require feedback from the stakeholders, a commitment on the budget for sustainability, and a willingness to devote a portion of that budget on consulting costs.

Once these items are addressed internally, EcoBuild Systems, LLC proposes a half-day eco-charette to further refine the strategy and identify the challenges. EcoBuild can assist in cost estimates, all aspects of sustainable design, grant and corporate sponsorship solicitation, marketing/PR, project finance, and strategic planning. Our goal is always to maximize your assets, and we look forward to assisting LACM in any manner to accomplish sustainable growth.

Thank you for this opportunity!

Regards,

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