

The Santa Fe Center for Community Sustainability

...advancing community-based technologies and businesses

September 12, 2005

Mission Statement:

The Santa Fe Center for Community Sustainability (the “Center”) seeks to:

- Foster the development of community-based water conservation and clean-energy technologies;
- Help create and support businesses that develop and deploy technologies and systems in ways that promote greater self-reliance for Santa Fe;
- Provide workforce training and education to create rewarding career opportunities for Santa Fe’s current and future workforce; and
- Develop a thriving local economy based on sustainable energy and efficient water use that increases the tax base in Santa Fe and New Mexico.

Vision Statement:

Santa Fe is a national leader in developing clean-energy and water conservation businesses to help meet long-term energy and water needs.

Background:

Santa Fe recently adopted a community-based economic development strategy and implementation plan that includes the goal of making it “the water conservation and clean energy capital of the U.S.” To reach this goal, Santa Fe must focus its economic development efforts on expanding and attracting water conservation and sustainable energy companies, and deploying their technologies in the local community. Additionally, Santa Fe must provide incentives that encourage the use of the technologies, and ensure that business support services and workforce development training are available to help attract, grow, and sustain these industries.

The strategy also recommends that Santa Fe create programs and update its building codes to promote sustainable energy and water conservation practices. One example is to require water conservation and sustainable energy technologies in all future buildings. Already, Santa Fe is an excellent laboratory for the deployment and testing of commercial and residential rainwater capture technologies.

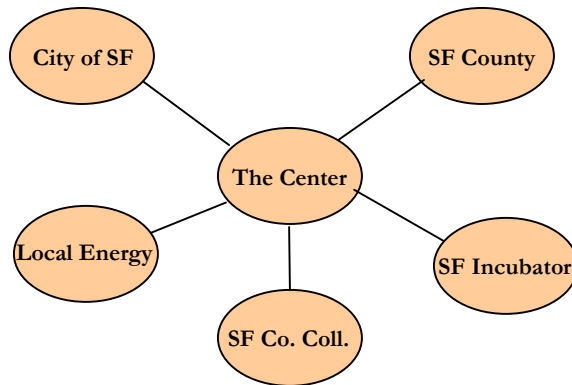
A plethora of sustainable energy resources, including wind, solar and biomass, exist in New Mexico. Sustainable energy technologies are well suited for Santa Fe as they typically use significantly less water than fossil fuels. Indeed, the Santa Fe region already has many experts and businesses in the sustainable energy and water conservation industries.

Given the range of resources in Santa Fe, the development of a “Center” dedicated to growing businesses in these industries appears to be a worthwhile endeavor.

About the Santa Fe Center for Community Sustainability:

Who is involved in creating the Center?

The Center will be a public-private collaboration, with the City of Santa Fe, Santa Fe County, the Santa Fe Community College, the Santa Fe Business Incubator, and Local Energy serving as the managing entities. (See Diagram).



Following is a brief summary of the resources and expertise that each entity will contribute toward the creation and operation of the Center.

The City of Santa Fe will ensure that the Center stays focused on making Santa Fe “the clean energy and water conservation capital of the U.S.” In 2004 the City adopted an economic development strategy that identifies seven target industries including the water conservation and sustainable energy technology. The City is committed to ongoing economic development activities, and will provide support using its local, state and federal resources. Among its many successful programs, the City is a founding partner in the creation of the SF Business Incubator, and continues to provide substantial support to its ongoing operations.

Santa Fe County has taken a unique approach to developing the property surrounding the community college, and the multi-year collaborative process that created the development plan put forth a progressive agenda for sustainable water and energy practices. The County will thus bring the builders and developers from the SFCC College District to the table to ensure that technologies developed at the center can be deployed locally. This will allow implementation and testing of networked designs for electrical and thermal energy systems, and local testing and improvement of water technologies developed and refined at the Center.

The Santa Fe Community College (“SFCC” or the “College”) has physical space available to host a startup facility for the Center as well as a myriad of support services. SFCC has already begun development of a biomass heating system for its campus, and is considering biomass-fired cooling and a combined heat-and-power (CHP) system as well. They are furthermore developing educational and vocational training programs in sustainability, which will be essential for the Center.

Local Energy is a 501(c)(3) nonprofit organization dedicated to the promotion of energy self-reliance for Santa Fe. With backgrounds in renewable energy and energy economics, Local Energy's projects are designed to keep energy dollars from leaking out of the community and to provide relief from the regressive impacts of rising fossil-energy costs. Local Energy will therefore provide technical direction to the Center's programs, ensuring that the focus stays on efforts that best provide for long-term sustainability to the region.

The Santa Fe Business Incubator (the "Incubator") will provide entrepreneurial support services to ensure that the Center's new businesses grow and prosper in New Mexico. This is a natural extension of the services presently offered by the SFBI, and the Board of SFBI supports the collaboration on the Center.

What will the Center do?

The Center will provide a physical space for sustainable energy and water conservation businesses and entrepreneurs to test and develop their technologies, and grow their businesses. Energy entrepreneurs at the Center will have access to electrical and a thermal networks to test and develop energy technologies under actual operating conditions, and water conservation businesses will have a physical space to test and refine technologies for commercial and residential applications.

Note that the Center is not a research center in that it will not develop technologies that have little or no application in our local economy. There are many other research centers and universities that provide services to research new technologies. Instead, the Center's technology review team will assess whether particular technologies are suited for the Center based on their ability to provide economic benefits to the local community.

The proposed Center design is in keeping with the National Science Foundation's Advanced Technology Center model. Santa Fe Community College is now a member of the National coalition of Advanced Technology Centers, and intends to seek mentors from that organization to further develop the Center along these lines.

The Center will attract and support businesses that seek to develop and deploy products and services regionally as well as for export outside of New Mexico. Similarly, the Center will allow businesses to more easily relocate to Santa Fe. The Center will provide a wide-range of business training support services to help grow companies, through the College's Small Business Development Center, workforce training services, and the Incubator.

As Santa Fe becomes a recognized hub for energy and water conservation technology development, the Center could expand its workforce and educational efforts to include an exchange program with national and international businesses and universities. The Center also will host annual trade conferences and symposiums.

Where will the Center be located?

The SFCC campus appears to be the best initial location for the Center, but partners in the Center will conduct a feasibility study to determine the most promising ultimate location for the Center. The College is ideally located within the County's planned progressive development, and it has ample physical space to build the needed facility. (A building of approximately 10,000 square feet could comprise enough space to start the Center.) The

college campus is furthermore heated by a district-energy system that would provide the network for testing of thermal energy systems, and it furthermore owns its own electrical infrastructure, allowing easy conversion to an electrical micro-grid for testing networked applications of distributed generation technologies.

Importantly, the SFCC District Master Plan supports renewable energy, community utilities, district energy, and water conservation. The College has also created a University Research Park under New Mexico statutes, allowing it to issue tax-exempt bonds to build any needed utility infrastructure.

When will the Center be operational?

The partners developing the Center already have commitments for some of the funding needed for the feasibility study and preliminary operations plan for the Center. The study will be highly detailed, including a two to four-year implementation plan showing capital and operational costs, revenues, and other benefits. The results of that study and plan will determine the startup date, but the Partners hope and expect to begin operations in 2006.

The study will include:

- market assessment -- identification of the drivers and barriers
- identification of potential startups and business clients, both local and out-of-state
- technical infrastructure needs
- business and job creation and revenue potential, including patent-development potential revenue sharing including equity, royalties, intellectual property, and patent protection
- available resources for funding, physical location, and size of building
- identification of the management team and potential investors, partners, and support services

Once the study is completed, and assuming feasibility is shown, the creation of a legal entity, establishment of a management team, and pre-construction design can begin. The Center would then be developed in phases, similar to the build-out plan of the SFBI.

The estimated cost of the Center's feasibility study and preliminary operations plan is approximately \$175,000.

Why do we need the Center?

The increasing scarcity of clean water and the growing instability in the energy sector suggest that communities should begin to take action. Communities can ensure their long-term economic viability by reducing water and energy use, and by increasing the availability of locally based sustainable energy.

The current water shortage and the global energy situation are creating an increasing need for the development and deployment of sustainable energy and water conservation technologies, and encouraging our community to address these issues locally will help us economically. Importantly, the benefits of water and energy development are synergistic:

reducing water use saves energy, and using sustainable energy reduces water consumption from coal and nuclear power plants.

The Center will help Santa Fe and New Mexico:

- create new businesses and jobs and stimulate entrepreneurship
- generate new workforce training and educational opportunities
- increase state and local tax revenues
- cut energy costs and reduce local dependence on oil and other fossil fuels
- conserve water resources & reduce global warming

Indeed the region's water constraints will effect future economic development activities. When choosing a location, businesses will consider whether Santa Fe and the region have an adequate future water supply. By promoting the growth of these industries, Santa Fe is ensuring its long-term future economic health.

New Mexico, under Governor Bill Richardson, has adopted a renewable energy portfolio standard. Governor Richardson's economic development plan and business incentive package also supports the development of sustainable energy technologies. Additionally, Santa Fe is home to so many creative people and businesses!

How will the Center begin operating?

The Center will be developed in phases, similar to the way the Santa Fe Business Incubator began. The initial 10,000 square-foot building could accommodate many businesses in the first phase of development. Technologies would be added in "modules" to ensure that we develop a core competency in each area, rather than trying to do too much at once. The first energy module could be biomass, for instance, taking advantage of project already under development at the College in collaboration with Local Energy and BIOS, their Austrian collaborators. (BIOS is an internationally renowned bioenergy engineering company.) A rainwater catchment module could also begin immediately based on local expertise in this area. Additional modules would be added as resources and needs are identified and competence is developed. Solar energy and grey-water recycling are likely to be the next modules.

How would businesses join the Center?

Imagine that a small startup company working in renewable energy or water conservation approaches the Center for help. The technology that this business wants to market is already available in Europe but lacks sufficient track record here in the U.S. The business owner lacks capital and a physical location to test and develop the product for the local market.

First, the potential client would submit a proposal for review by the Center's Techno-Economic Review Board. The Board would then determine whether the proposal meets the mission and vision of the Center based an evaluation using the following criteria:

1. **Technical Relevance and Merit.** Will the proposed technology address core energy and water issues facing Santa Fe?

2. **Technical Approach and Work Plan.** Is the plan for development and deployment technically sound and complete?
3. **Community Value.** Will deployment of the technology create local economic benefits, protect the community from the hardships of rising energy costs and water degradation, improve local self-reliance in energy and water, and improve our environment?
4. **Technical and Management Capabilities.** Is the management team technically and managerially qualified?

Upon favorable review, the business is admitted to the Center. The Center's management team then collaborates with the business to create a timeline for product testing, evaluation, business development, marketing, etc. It is expected that within a reasonable period of time, the business will "graduate" from the Center, much like businesses graduate from the SF Business Incubator.

What steps are needed to get the feasibility study underway?

The partners are currently involved with or planning the following tasks:

- Finalizing the Request for Proposals (RFP) for the feasibility study
- Developing a plan to evaluate and review proposals
- Identifying the specific roles for the Center's steering committee and partners.
- Exploring fundraising possibilities to support the Center and feasibility study
- Contacting local and national foundations for support

How can I find out more about the Santa Fe Center for Energy & Water Technology?

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