

Environmental Finance Center Network California State University, Hayward - Region 9 1998 Annual Report

ANNUAL REPORT 1998

Environmental Finance Center
California State University, Hayward
U.S. EPA Region 9

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EXECUTIVE OVERVIEW

The Environmental Finance Center, Region 9 (EFC9), is a University-based Center providing expertise on environmental financing

and economic issues. EFC9 is affiliated with California State University, Hayward (CSUH), and is supported by the U.S. Environmental Protection Agency (EPA). The Mission of EFC9 is to promote support and sustain the environmental goods and services industry through a variety of programs and services including but not limited to: small business outreach, environmental business directories, environmental industry Charrettes, environmental export assistance, pollution prevention assistance and Charrettes, technology transfer and an environmental business information clearinghouse.

EFC9's mission to help small business is derived from recent research revealing the poor performance of the environmental goods and services industry in the US. The current worldwide market for the environmental goods and services industry (EGSI) is about \$450 billion (1997) and the largest national market, comprised primarily of small and medium-sized firms, is the United States, accounting for roughly 35 percent of the world trade. Nevertheless, the US industry is starting to mature in most sectors, and is expected to grow at a slower rate than the rest of the world market. In addition, the EGSI faces numerous barriers to future growth including uncertainty in the regulatory process, uneven enforcement, multiple testing requirements and lack of financing for technology commercialization and beyond. The EFC is making information available on the World Wide Web at <http://www.greenstart.org/efc9>

[Introduction](#)

Pollution prevention technology has been identified as the key to success for the EGSI. Pollution prevention technology is the fastest growing and most innovative sector in the environmental industry. Because it reduces or eliminates waste production, it is considered by most experts to be the future and natural path of the industry. However, like the environmental industry as a whole, there are several barriers to pollution prevention implementation, from a lack of equity capital to a lack of appropriate test sites for new technologies.

As a result, EFC9's mandate is threefold:

- Help small business,
- Advance the environmental industry, and
- Promote pollution prevention.

[1998 In Review](#)

EFC9 completed a series of tasks in 1998 including five workshops at the National Marketplace for the Environment Conference in Los Angeles, the San Francisco Pollution Prevention Demonstration Project which included two Charrettes focused on alternatives to dry cleaning, an expansion of the 1997 directory, *Financing Environmental Technology: A Funding Directory for the Environmental Entrepreneur*, and an environmental finance workshop held at the National Energy Conference on the Future of Alternative and Sustainable Technologies in Nevada. The following is an overview of our major accomplishments in the past year.

[National Marketplace for the Environment Conference - Los Angeles:](#)

May 6-8, 1998

On May 6 through 8, the Environmental Finance Center presented five Environmental Finance Workshops at the National Marketplace for the Environment Conference in Los Angeles. The three day Marketplace for the Environment Conference was a national conference hosted by Eco Expo and the Environmental Education Foundation, and included a number of informative sessions and workshops as well as an exhibit hall of over 100 innovative environmental technologies. The conference included seven theme tracks consisting of five sessions each. The conference themes included, 1) Transportation, 2) High Performance Buildings & Energy Efficiency, 3) Pollution Prevention: H2O/Air, 4) Green Purchasing, 5) Waste Management/Recycling, 6) The Hazards and Opportunities of De-Regulation, and 7) Environmental Financing. EFC9 was a Charter Sponsor of the event.

The conference attracted over 1,000 participants and was an extremely high-profile event for the Environmental Finance Center. In addition to our workshops, EFC9 hosted its own booth on the exhibition hall floor where hundreds of small business owners, and local, state, federal and international agencies were provided with information on our Center and the EFC Network. Finally, EFC9 hosted the following workshops

Workshop #1: Wednesday, May 6 - Pulling Yourself Up: Bootstrapping And Beyond

Workshop 1 offered information on more creative, less known options for funding a small environmental business through private sourcing opportunities.

Workshop #2: Wednesday, May 6 - Getting Government Financing

Workshop 2 included a variety of state and local program representatives who presented public financing opportunities for small environmental businesses.

Workshop #3: Thursday, May 7 - Investment Opportunities in Energy and The Environment (Equity Financing, Venture Capital and Angels)

Workshop 3 provided information on a variety of equity options for the environmental entrepreneur.

Workshop #4: Thursday, May 7 - Small Business Hatcheries: Environmental Incubators

Workshop 4 allowed the audience to meet environmental incubator directors and their tenants.

Workshop #5: Friday, May 8 - Accessing Foreign Markets: Financing and Services for Export

Workshop 5 was designed to help the environmental entrepreneur find programs and funding opportunities to guide them into the export market.

San Francisco Pollution Prevention Demonstration Project - Dry Cleaning Charrettes

In the Fall of 1997, the Environmental Finance Center for EPA Region 9 (EFC9) received a grant from the Environmental Finance Center for EPA Region 5 (EFC5), in conjunction with the US EPA to target a specific industry and produce a plan for stimulating more Pollution Prevention (P2) activities in that San Francisco Bay Area industry. After consultation with EFC5, EPA Region 9 and the Bay Area Hazardous Waste Reduction Committee, EFC9 determined that the dry cleaning industry would make the most suitable target.

As a result, between December 1997 and October 1998, EFC9 conducted numerous informal interviews with regional, county and local government agencies including economic development agencies, small business organizations and representatives, community organizations, dry cleaners, environmental non-profit organizations, and industry insiders concerning the dry cleaning industry. In addition, EFC9 organized and held two Charrettes to identify future pollution prevention approaches and strategies to use with East Bay dry cleaners. The goal of these informal interviews and Charrettes, more specifically, was to solicit the help of dry cleaners, regulatory agencies, local governments and environmental non-profit organizations to determine effective ways to encourage dry cleaners to reduce perchloroethylene (perc) usage, a chlorinated hydrocarbon synthetic solvent, without reducing their profits.

Expanding The Environmental Finance Directory

In 1997, EFC9 completed research on a number of sources of debt and equity capital potentially available to environmental businesses in California. These results were compiled in a comprehensive Directory on financing for environmental technology development and commercialization. This Directory is entitled: *Financing Environmental Technology B A Funding Directory for the Environmental Entrepreneur*. Because of the ensuing popularity of the original volume, EFC9 prepared a 1998 *Directory Update* which includes expansions and updates of old sections and several new sections including a review of funding sources throughout Region IX. The 1998 Directory has the following chapter headings:

- An Environmental Industry Overview
- General Funding Options
- Venture Capital Investment in the Environmental Industry
- Finding Angels
- Technology Incubators
- Private Funding Sources (including):
 - Online Networks
 - Forums and Fairs
 - Socially Responsible/Environmental Investment Funds
 - Environmental Investment Management Firms
 - Environmental Venture Capital
 - Socially Responsible Banks and Credit Unions
- Federal Government Programs
- Programs in California, Nevada, Hawaii and Arizona, and
- International Opportunities.

EFC9 Workshop: Global Energy Futures Exchange - National Energy Conference on the Future of Alternative and Sustainable Technologies

EFC9 conducted an environmental finance workshop at the Global Energy Futures Conference in Las Vegas on October 28. The conference, national in scope, was hosted by the Nevada Test Site Development Corporation, and was sponsored by numerous national organizations including:

- US Department of Energy,
- Lawrence Livermore National Laboratory,
- Los Alamos National Laboratory,
- Oak Ridge National Laboratory,
- Sandia National Laboratory, and
- President's Council on Sustainable Development,

The title of our workshop was "Renewables: From Concept to Commercialization" and the focus was finance for small environmental businesses from start-up phases to commercialization. The event was designed to provide information on opportunities for finance

through little-known resources.

Accomplishments

As discussed in the Executive Overview above, EFC9 completed numerous projects in 1998. The following is an in-depth review of our major accomplishments.

National Marketplace for the Environment Conference - Los Angeles, May 6-8, 1998

On May 6 through 8, the Environmental Finance Center presented five Environmental Finance Workshops at the National Marketplace for the Environment Conference in Los Angeles. The three day Marketplace for the Environment Conference was a national conference hosted by Eco Expo and the Environmental Education Foundation, and included a number of informative sessions and workshops as well as an exhibit hall of over 100 innovative environmental technologies. The conference included seven theme tracks consisting of five sessions each. The conference themes included, 1) Transportation, 2) High Performance Buildings & Energy Efficiency, 3) Pollution Prevention: H2O/Air, 4) Green Purchasing, 5) Waste Management/Recycling, 6) The Hazards and Opportunities of De-Regulation, and 7) Environmental Financing. EFC9 was a Charter Sponsor of the event along with the following public agencies:

- US Department of Agriculture,
- AARC Corporation,
- General Services Administration,
- Department of Commerce,
- California Air Resources Board,
- South Coast Air Quality Management District,
- Southern California Association of Governments,
- and other local agencies.

The conference attracted over 1,000 participants and was an extremely high-profile event for the Environmental Finance Center. In addition to our workshops, EFC9 hosted its own booth on the exhibition hall floor where hundreds of small business owners, and local, state, federal and international agencies were provided with information on our Center and the EFC Network. Much interest was expressed in our Finance Directory, and, much to our surprise and pleasure, Joanne Fox-Przeworski, North American Director for the United Nations Environmental Programme, purchased a copy of the Directory to use as a prototype for other countries interested in promoting and financing their own environmental technology industries.

As stated above, EFC9 also hosted five Environmental Finance Workshops with an average attendance of about 20 to 25 participants per workshop. During each workshop, participants were provided a form to assess the speakers (very effective, somewhat effective, not effective) and the session as a whole (very useful, somewhat useful, not useful). A space for comments was also included. Finally, each workshop (with the exception of Bootstrapping which was a series of case studies) concluded with an actual small business representative who acted as a case study for the type of financing which was discussed. The case study acted as a "sounding board" for the audience and presented the pros and cons of the finance opportunities offered by the speakers.

Overall, the response to these workshops was extremely favorable, however, we look at this Conference as a learning opportunity. As a result, each workshop review below includes a critical "Next Steps" category which examines ways to make each session more successful and valuable to the small environmental entrepreneur in the future. The workshops are reviewed below.

Workshop #1: Wednesday, May 6 - Pulling Yourself Up: Bootstrapping And Beyond

This session offered information on more creative, less known options for funding a small environmental business through private sourcing opportunities. The moderator and speakers included:

Moderator: Sarah Diefendorf, Executive Director, EFC9

Speakers: Dean Walker, California Organic Cotton Company
Christopher W. Myers, Epics International
Kari Steinberg, CEO, The Daily Planet

In general, the audience was quite favorable towards this session. While some members of the audience were inspired by personal success stories, others wanted to hear more options about funding sources and direct contacts. At least one wanted to hear more about preparing the initial business plan. As usual, the period set aside for personal interaction between speakers and audience proved the most fruitful as small groups paired off and were able to talk about finance options at a more personal level.

Next Steps: The concept for this type of workshop is strong. In the future, we will shorten the presentation period and provide table space for each presenter to speak individually with audience members. In addition, we are considering an entire workshop series on starting an environmental business which would include: 1) Preparing Your First Business Plan; 2) Bootstrapping; 3) Success and

Failure - What to Do and Not to Do; 4) Starting Your First Business.

Workshop #2: Wednesday, May 6 - Getting Government Financing

This session included a variety of state and local program representatives who presented public financing opportunities for small environmental businesses. Participants included:

Moderator: Sarah Diefendorf, Executive Director, EFC9

Speakers: James Young, State Trade and Commerce Agency
Monica Carlos, Los Angeles County Recycling Market Development Zone, (RMDZ)
Armando Romero, Small Business Development Center, Pomona
Ron Greitzer, President, Los Angeles Fiber

The review for this session was very favorable with the majority of the audience finding it very useful and the remainder finding it somewhat useful. It did however, receive the poorest attendance. Criticisms of the presentations suggested that they were either too general or that they offered too much information. Our case study, having received the majority of his funding from public agencies, generated the most interest and was even featured in a video provided by Monica Carlos with RMDZ.

Next Steps: While it is necessary to offer information on government funding, here again, speaking time should be reduced and more time should be set aside for members of the audience to sit down with government representatives to discuss individual concerns. A better format for the future would provide specific program representatives who are responsible for reviewing grant and loan applications, who would then be available for consultation with small business owners and representatives interested in applying for funds from these same programs.

Workshop #3: Thursday, May 7 - Investment Opportunities in Energy and The Environment (Equity Financing, Venture Capital and Angels)

This session provided information on a variety of equity options for the environmental entrepreneur. Participants included:

Moderator: Sam Doctors, Executive Director, ACET

Speakers: John Schofield, President Thermatrix
Robert Anfuso, Director of Water Practices, Environmental Business International (EBI)
Frank Pope, Investment Opportunities

This session was by far the best attended and the most entertaining. Overall, the presentations were very effective and it was clear that the audience was eager to hear from Frank Pope, a venture capitalist with Investment Opportunities who has a record of investing in environmental technology, and John Schofield, one of the rare environmental entrepreneurs who has received venture capital over the years. Robert Anfuso, from EBI, provided an industry overview.

The majority of participants considered this session very useful, however, the question and answer period was surprisingly short. The reason for this became obvious with the flood of audience members who lined up afterwards to speak privately with either Frank Pope or John Schofield.

Next Steps: The popularity of this segment suggests that it should be enlarged in the future. There is a definite sensitivity on the part of environmental entrepreneurs towards speaking openly about equity needs. Therefore, any future workshops on equity funding must include ample private time for individual entrepreneurs to sit down with potential investors. Equity funding is another session that could be enlarged to include several workshops including: 1) Presenting Your Business to Venture Capitalists and Angels; 2) How to Meet Venture Capitalists; 3) How to Meet Angels; 4) Beyond Angels and Venture Capitalists: Other Equity Options.

Workshop #4: Thursday, May 7 - Small Business Hatcheries: Environmental Incubators

This session allowed the audience to meet environmental incubator directors and their tenants. Session participants included:

Moderator: Sarah Diefendorf, Executive Director, EFC9

Speakers: Sam Doctors, Executive Director, Alameda Center for Environmental Technologies (ACET)
Larry O'Donnell, Director, Border Environmental Commerce Alliance (BECA)
Mariana Laluz, President, EZRA International
Julie Holland, President, Trilevel

Here again, the majority of the audience found this workshop very useful. Many of the attendees were there to find out about incubators in general, while others came to inquire about possibly establishing tenancy. Perhaps the most valuable presentation was from Mariana Laluz who was a tenant at BECA. Her experience, not only as an incubator tenant but as a small environmental business owner was of great interest to the majority of the audience. Because her presentation was on synergy and cooperation among incubator tenants, many of the audience members inquired about how they might go about teaming with other small businesses both in and

outside incubators.

After the presentation, several small business owners gathered in small groups both with Mariana Laluz and on their own, to discuss their businesses and opportunities to work together.

Next Steps: Perhaps the most exciting and intriguing thing to come out of this particular presentation was the obvious interest in synergy among the environmental entrepreneurs. It was clear that they were all eager to share ideas and to help each other where they could. This is exactly the type of energy that EFC9 should be capitalizing on and in the future, and we are considering hosting small environmental business networking events. These events may include a single speaker, but the overall focus should be on bringing small like-minded businesses together to share ideas and establish partnerships.

Workshop #5: Friday, May 8 - Accessing Foreign Markets: Financing and Services for Export

This session was designed to help the environmental entrepreneur find programs and funding opportunities to guide them into the export market. Session participants included:

Moderator: Sarah Diefendorf, Executive Director, EFC9

Speakers: Tricia Snow, Business Development, Import Export Bank
Mary Wilson, Technical Coordinator, California Environmental Partnership
Gene Bohatch, Director, Center for International Trade Development
Karla Haynes, International Trade Specialist, US Department of Commerce
Dana Stuart, Director/Partner, Organics Conversion Corporation

Here again, the review was overwhelmingly favorable. Indeed, at least one attendee thought that it was "the best session he attended at the conference." The speakers were, for the most part, well prepared and provided excellent presentations. All of them provided their phone numbers and direct office extensions and encouraged members of the audience to call. The audience continued with questions long after the session was supposed to end which resulted in an extremely dynamic and informative workshop.

Next Steps: The export market is an extremely important market for the environmental industry and small businesses need all the help they can get. Mary Wilson with the CA Environmental Partnership expressed strong interest in working with us in the future to put together a series of export workshops. This is something we feel very strongly about accomplishing and we are currently pursuing the possibility of a joint effort sometime in the future.

Conclusions

As stated above, the National Marketplace for the Environment Conference was an extremely successful and high profile event for the Environmental Finance Center Region 9. We have secured a number of new contacts both at the State and Federal levels which we are currently pursuing for future funding and work. One very important contact was with Bob Armstrong (executive Director of AARC), who is very interested in our workshops on environmental finance. He would like us to develop a program which is even more hands-on and workshop oriented and we are in the process of putting together a proposal to develop such a small business financing program.

Future Workshops

It is clear, however, that while this type of venue is valuable in terms of exposure and prestige, it is difficult to put together a focused, hands-on workshop program that responds to the extremely diverse needs of the conference attendees. As a result, the presentations and workshops become somewhat general, which is less valuable for the environmental entrepreneur. While we will continue to offer workshops at high-profile conferences when hired to do so, our future "in-house" workshops will become even more tailored to the small business owner. This means that we should offer a range of workshops that respond to various levels of business development. In other words, while a start-up business may be interested in a session on how to prepare a business plan, another company in the middle of considering its initial public offering most certainly would not. Therefore, future workshops will be even more tightly tailored to a specific market and may include such topics as:

- First Steps: Turning an Idea Into Reality,
- Federal Grants for Research and Development,
- Demonstrating Your Technology,
- Transferring Technology From the National Laboratories,
- Mentoring Partnerships,
- Valuing Your Company, and
- Initial Public Offerings.

San Francisco Pollution Prevention Demonstration Project - Dry Cleaning Charrettes

In the Fall of 1997, the Environmental Finance Center for EPA Region 9 (EFC9) received a grant from the Environmental Finance Center for EPA Region 5 (EFC5), in conjunction with the US EPA to target a specific industry and produce a plan for stimulating more Pollution Prevention (P2) activities in that San Francisco Bay Area industry. After consultation with EFC5, EPA Region 9 staff

and the Bay Area Hazardous Waste Reduction Committee, EFC9 determined that the dry cleaning industry would make the most suitable target industry.

As a result, between December 1997 and October 1998, EFC9 conducted numerous informal interviews with regional, county and local government agencies including economic development agencies, small business organizations and representatives, community organizations, dry cleaners, environmental non-profit organizations, and industry insiders concerning the dry cleaning industry. In addition, EFC9 organized and held two Charrettes⁽¹⁾ to identify future pollution prevention approaches and strategies to use with East Bay dry cleaners. The goal of these informal interviews and Charrettes, more specifically, was to solicit the help of dry cleaners, regulatory agencies, local governments and environmental non-profit organizations to determine effective ways to encourage dry cleaners to reduce perchloroethylene (perc) usage, a chlorinated hydrocarbon synthetic solvent, without reducing their profits.⁽²⁾

The following report presents an overview of both Charrettes and incorporates knowledge gained through the numerous informal interviews as discussed above.

The first Dry Cleaning Pollution Prevention Charrette was held on Wednesday May 19, 1998 in Berkeley, CA from 10:00 am to 3:00 p.m. and was attended by 18 individuals - two dry cleaners and one dry cleaning association representative, seven representatives from government agencies and eight representatives of non-profit organizations. The second Charrette was held in Oakland, CA on Sunday October 18 from 2:00 to 5:30 p.m. and was attended by 15 individuals - three dry cleaning operators, one intended operator, four representatives from government agencies and seven non-profit organization representatives.

Both Charrettes were similarly structured, but focused on different issues. The Berkeley Charrette addressed the feasibility of increasing the amount of wet cleaning done at dry cleaning plants, while the Oakland Charrette examined the feasibility of adopting other fabricare technologies as well (i.e. petroleum-based solvents, CO₂ and Rynex).

Based on the outcomes of the two Dry Cleaning Pollution Prevention Charrettes, EFC9 has concluded that lack of adequate financing (as initially hypothesized) is not the primary barrier preventing dry cleaners from transitioning into alternative fabricare technologies. The barriers identified at the two Charrettes are summarized below.

Barriers To Alternative Fabricare Technologies

No Credible Health Impacts

Dry cleaners don't necessarily believe that perc is bad for their health, and, even if it is, they have reduced perc usage significantly throughout the 1990s and feel that any potential health impacts have been mitigated through the their implementation of cleaner dry cleaning technologies.⁽³⁾

Technical and Financial Unfeasibility

"Nothing can beat perc." Dry cleaners believe that alternative forms of fabricare are not as financially and technically feasible as perc. Specifically, dry cleaners think they are wet cleaning as much clothing as is feasible now; that petroleum-based solvents are not as effective as perc; that CO₂ is not technically or cost-effective; and that Rynex is not as effective as perc and in fact may even be a pollutant.

Uncertain Regulatory Environment

While dry cleaners feel that federal, state and local regulation of perc usage is overblown and redundant, they are also reluctant to adapt new technologies and/or solvents if they face an unknown and potentially even more cumbersome regulatory environment in the future.

Market Uncertainty

Dry cleaners do not think most consumers will be willing to pay the cost required to make wet cleaning a financially viable alternative and they think that consumers will be suspicious of any changes in garment cleaning processes.

Recommendation

Clearly wet cleaning and other alternatives to dry cleaning face an uphill battle within the dry cleaning community. The general overall feeling among the cleaners seems to be "we've complied with your regulations, we run a clean operation, we would change if we could, but there are no viable alternatives. What more do you want!?"

Indeed, if the regulatory community wishes to pursue an overall policy of ultimately phasing out the use of perchloroethylene, they must do more than make vague assertions about the health hazards of perc and proclaim burdensome unfunded mandates that only serve to enhance the dry cleaners dislike and distrust of the regulators. In response to the often hostile environment that exists between government agencies and the dry cleaning community, EFC9 has compiled a number of recommendations culled from those made at the Charrettes, that we believe will be most effective at helping dry cleaners and regulators overcome the barriers identified above.

Health Impacts

Regulators must clarify the human health impacts of perc. In addition, a simplified report summarizing the human health hazards of perc, including the science behind the conclusions should be prepared and distributed to trusted industry channels who will then publicize the information and make presentations at dry cleaning association meetings. If dry cleaners can be convinced by credible peers that using perc is hazardous for themselves and their employees, they are more likely to be open to adopting alternative technologies.

Technical Feasibility

Proof that alternative technologies work in a commercial setting must be demonstrated. Concise, easy to understand comparative information on alternative fabricare cleaning equipment, methods, solvents, techniques, etc. should be prepared in partnership with industry representatives who can then present the information to dry cleaners in their own languages. ⁽⁴⁾

Wet Cleaning

Convenient training opportunities in wet cleaning should be available. There is a shortage of well-trained wet cleaning pressers.

Petroleum-Based Solvents

Information on the full range of petroleum-based products should be made available through non-partisan industry associations.

CO2, Rynex and Others

New developments that affect the feasibility of these alternatives should be monitored and shared with industry associations. Fabricare plants that use these alternatives should be publicized in industry association trade papers and journals and in the mainstream media.

Financial Feasibility

As in the case of technical feasibility, the financial feasibility of commercial fabricare establishments using alternative technologies should be analyzed. Short, easy to understand, comparative cost information on fabricare alternatives should be assembled and disseminated through trusted sources. Local governments would do well to recognize that dry cleaners create jobs for low-income urban residents.

Wet Cleaning

Training to help dry cleaners maximize their wet cleaning should also be available.

Regulatory Concerns

Regulatory uncertainty for dry cleaning alternatives should be reduced. Dry cleaners must be assured that if they invest in a cleaner alternative technology today, they will not be subject to major regulatory changes before the equipment is fully amortized.

Market Uncertainty

The public is largely unaware of fabricare alternatives and should be educated without damaging the current industry. In addition, garment manufacturers do not normally include a "safe for wet cleaning" designation on their care labels. Regulators should work with the fabric and garment industries to help make fabricare alternatives more feasible and attractive.

Wet Cleaning

There is a need for consumer education to increase demand for wet cleaning. Market research should be conducted that identifies and characterizes actual wet cleaning customers who patronize wet cleaning shops nationally. Targeted marketing campaigns should be developed in regions that could potentially support wet cleaning operations.

Next Steps

At both Charrettes, each participant identified the "next steps" their organization plans to take to follow-up on the numerous recommendations made during the Charrettes. EFC9 will pursue the following steps to further educate dry cleaners and the public on the merits of alternatives to dry cleaning.

Target Potential Wet Cleaners

Through the Charrettes, EFC9 has identified several dry cleaning operators who have expressed interest in expanding their wet cleaning services. We plan to work with them to determine what assistance they may require to expand their facilities. We will also work with entrepreneurs interested in opening new 100% wet cleaning plants in the East San Francisco Bay.

Educate Consumers

EFC9 will work with Ecology Action and local dry cleaning associations to develop a campaign to encourage consumers to increase the amount of clothing they have wet cleaned at dry cleaning establishments and reduce their dry cleaning demands.

Establish Fabricare Training Centers

EFC9 will look at the feasibility of establishing fabricare training centers in Region 9. We will work with dry cleaning industry associations, community groups, and educational institutions in this endeavor.

[Expanding the "Funding Directory for the Environmental Entrepreneur"](#)

In 1997, EFC9 completed research on a number of sources of debt and equity capital potentially available to environmental businesses in California. These results were compiled in a comprehensive Directory on financing for environmental technology development and commercialization. This Directory is entitled: *Financing Environmental Technology B A Funding Directory for the Environmental Entrepreneur*. Because of the ensuing popularity of the original volume, EFC9 prepared a 1998 *Directory Update* which includes expansions and updates of old sections and several new sections including a review of funding sources throughout Region IX. The 1998 Directory has the following chapter titles:

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- Socially Responsible/Environmental Investment Funds
- Environmental Investment Management Firms
- Environmental Venture Capital
- Socially Responsible Banks and Credit Unions
- Federal Government Programs
- Programs in California, Nevada, Hawaii and Arizona, and
- International Opportunities.

The Directory also provides a series of appendices which include: California Export Assistance Listings; Key Contacts Within the U. S. Department of Commerce; Major Environmental Technologies Industry Associations; Resource Guide for Small Business; Glossary of Terms; and, a Bibliography.

The *Funding Directory* has become a crucial, and the most popular part of our services for environmental entrepreneurs. Requests for the Directory come in nearly every day and EFC9 has provided copies of the 1998 Update to numerous small businesses and entrepreneurs, and diverse groups, organizations and agencies including:

- EPA
- DOE
- National Laboratories
- Nevada Test Site Development Corporation
- Army Corps of Engineers
- Local, county and state government agencies in California, Nevada, and Arizona
- Environmental non-profits, and
- United Nations Environment Program in New York and Paris.

The entire text of the 1998 Finance Directory will be available on our website by January, 1999.

[EFC9 Workshop: Global Energy Futures Exchange: National Energy Conference on the Future of Alternative and Sustainable Technologies](#)

EFC9 conducted an environmental finance workshop at the Global Energy Futures Conference in Las Vegas on October 28. The conference was hosted by the Nevada Test Site Development Corporation, and was sponsored by the following organizations:

- US Department of Energy,
- Desert Research Institute,
- Lawrence Livermore National Laboratory,
- Los Alamos National Laboratory,
- Oak Ridge National Laboratory,
- Sandia National Laboratory,
- President's Council on Sustainable Development,
- State of Nevada, and
- Bechtel Nevada.

The title of our workshop was "Renewables: From Concept to Commercialization" and the focus was finance for small environmental businesses from start-up phases to commercialization. The event was designed to provide information on opportunities for finance through little-known resources. The panel included:

Harry W. Braun, Chairman & CEO, Stirling Energy Systems. Mr. Braun talked about the diversity of his product and the numerous investors that he has found to support the commercialization of his technology. Rather than seeking out traditional funding

sources such as banks or venture capitalists, Mr. Braun secured financial backing from a number of diverse interests including McDonnell Douglas, Motorola and Arizona Public Service Company.

Kenneth E. Anderson, Vice President, Regional Environmental Practice Manager, Willis Corroon. Mr. Anderson specializes in understanding the environmental risks faced by clients and designing the appropriate risk management and insurance program that best addresses these risks. Mr. Anderson advises clients on the best coverage at the best price. His addition to the panel helped emphasize the importance of utilizing cost-saving measures to maximize existing assets which help keep a small business afloat.

John Boesel, Executive Vice President, Calstart. Mr. Boesel is responsible for developing and managing CALSTART's technology and incubator programs. After discussing the advantages of locating a small business in an incubator, Mr. Boesel reviewed the many grant and funding opportunities available to small businesses involved in alternative transportation technologies.

Approximately 40 people attended the workshop and the audience was involved and attentive. However, overall, private business representation at the conference was limited. In the future, it will be in our best interest to participate in events that focus primarily on small environmental business issues and include a trade show as part of the conference.

New Initiatives

The following is a description of the major new initiatives that EFC9 will be undertaking throughout 1999.

Technology Transfer - From the National Laboratories to Commercialization

Background

On December 4, 1997, EFC9 held a Charrette which focused on the process of technology transfer between the National Laboratories located in East San Francisco Bay and small environmental technology entrepreneurs. Attendees at the Charrette included representatives from all three Bay Area National Laboratories (Sandia, Lawrence Berkeley, and Lawrence Livermore), Stanford Office of Technology Transfer, Environmental Protection Agency for Region 9, Alameda Center for Environmental Technology, Bay Area Regional Technology Alliance, and various small environmental businesses.

Transferring technology from Federal Laboratories can be highly beneficial. Businesses can obtain cutting edge technology, increased market exposure, and improved technical credibility when they adopt Lab technologies. However, the bulk of the environmental industry is comprised of small and medium-sized businesses. Due to cost and time constraints (at best, the process can take at least one year to obtain technology from the laboratory), it is most often the large companies that are best able to deal with the built-in barriers and delays inherent in the transfer of technology from the National Laboratories. To that end, both the Labs and the industry suffer. The majority of the industry (small entrepreneurs) cannot afford to take advantage of new and innovative technologies from the Labs, and the Labs are forced to rely on a reduced pool of businesses to commercialize new technologies. Also, we know from decades of empirical research, that the best vehicle for transferring technology from one institutional setting to another is the technical entrepreneur. As a result, too many creative new technologies languish on the "shelves" waiting for an entrepreneur willing to navigate the cost and complexities of technology transfer.

Tasks

Putting Lab personnel and small businesses together, at the December 1997 Technology Transfer Charrette we were able to identify some key areas where the technology transfer process could be enhanced. As a result of this Charrette, the DOE approached EFC9 and requested a proposal to help facilitate technology transfer from two East bay labs, Lawrence Livermore and Lawrence Berkeley, to small businesses in the private sector.

In early 1999, EFC9 will be carrying out the following tasks:

- Define "best candidate" technologies available for transfer from Lawrence Livermore and Lawrence Berkeley Laboratories.
- Create a list of potential businesses/entrepreneurs interested in laboratory technologies,
- Determine EFC9's role within the process as intermediary between small businesses and the national laboratories.
- Create a Technology Transfer packet which includes 1) a list and brief description of available technologies, 2) a "primer" on national laboratory technology transfer processes, 3) a description of EFC9's staff, capabilities and role in the project.
- Establish a marketing and outreach plan to introduce available technologies to the widest possible audience.

Metal Finishing Strategic Goals Program

The CSI Metal Finishing Subcommittee has recently launched a nation-wide voluntary program for metal finishers called the National Strategic Goals Program. Metal Finishers who sign up for this program are pledging to make a good-faith effort to achieve some very lofty "better than compliance" environmental goals including better metals utilization, reduction in energy/water use, and reduced

emissions of metals and organic TRI chemicals to the environment.

The CSI Metal Finishing Subcommittee identified this industry's inability to access capital for environmental improvements/investments as one of its biggest obstacles in meeting and/or exceeding current environmental requirements. A few years ago, with the assistance of the Region 3 Environmental Finance Center, a Charrette was held with multi-stakeholder representatives and members of the Environmental Finance Advisory Board. As a direct result of this Charrette, the EFAB, the CSI Metal Finishing Subcommittee, and the CSI Council made a recommendation to Administrator Browner that EPA should work with the Small Business Administration to develop an Environmental Loan Program for small metal finishers.

The ultimate goal of this project is two-fold:

- 1) to develop and test a local pilot environmental loan program for small metal finishers which can be expanded nation-wide; and
- 2) to explore the potential for expanding this project nationally, and eventually, to other appropriate industrial sectors.

EFC9 Tasks

The Small Business Administration has set aside 3 Million Dollars for its Los Angeles Regional Office to use to guarantee loans for a pilot program in Southern California. However, the SBA needs technical assistance in developing this program in such a way that it meets the needs of the metal finishing industry while adhering to the structure recommended by the EFAB and the CSI principles of "cleaner, cheaper, smarter" and multi-stakeholder involvement. To that end, serving as a liaison between SBA, EPA, and the EFAB, EFC9 will provide the following technical assistance to the SBA.

Working with existing stakeholders such as Barrio Planners (environmental justice and loan application preparation), Metal Finishing Association of Southern California (technical industry information), REBRAC (metal finishing technology and process experts), and others EFC9 will:

- Identify SBA's technical requirements and options for achieving them;
- Identify the appropriate financial, industrial, and environmental participants;
- Conduct one or more Charrettes and smaller multi-stakeholder workshops as needed;
- Identify and solicit lending institutions to handle loan disbursements;
- Identify individuals and/or organizations that can help to service loan applications;
- Secure the services of additional experts/consultants if deemed necessary/appropriate; and,
- Issue a report on a methodology for rolling out this pilot loan program with potential roles and responsibilities.

Continuing Our Efforts to Promote Wet Cleaning

As a result of our two Charrettes, literature reviews and discussions with staff at Ecology Action, EFC9 has identified the most effective strategies for increasing pollution prevention in the dry cleaning industry as falling into the following categories:

- Increasing the demand for wet cleaning,
- Providing dry cleaners with information on training and techniques to increase the efficiency of perc machines and the amount of wet cleaning performed, and to support cleaners adopting "greener technologies",
- Working with dry cleaners' landlords, and
- Teaming up with local governments to support dry cleaners' pollution prevention efforts.

Based on the above categories, EFC9 is considering a number of options when determining which tasks to pursue in 1999. Given that our resources are limited, we will be unable to perform all of the following tasks, therefore, we are currently working with appropriate EPA Region 9 pollution prevention staff to identify which tasks are most effective and will best compliment on-going Regional efforts. The following projects are currently being considered.

Increase Demand for Wet Cleaning

- Work with local dry cleaners interested in increasing the amount of professional wet cleaning they do to determine what help they need in this effort. Tasks would include identifying support they desire for equipment purchase, training and marketing their wet cleaning services.
- Work with a wet cleaner to open up a facility in the East Bay. EFC9 would identify sources of support for various business needs which may include: site selection, financial and business planning assistance, locating employees and suitable training opportunities, and marketing.
- Work with local high profile garment manufacturers (example: Jessica McClintock) in San Francisco and/or Southern California to include a "professional wet clean" label in their garments. More specifically: (a) develop contacts in the garment industry to determine interest, (b) assess status of federal and international wet cleaning labeling efforts, and (c) develop tie-in advertising and media campaigns to publicize the label.

- Develop generic professional wet cleaning marketing materials that can be adapted to the needs of an individual wet cleaner.
- Work with specialty cleaners B correctional facilities, textile industry, military bases, hotels & motels, and linen and uniform supply shops to help them reduce perc usage.

Work With Landlords

- Develop materials for dry cleaners' landlords about how to reduce their liability through pollution prevention.

Provide Information On Training Opportunities and Resources

- Explore the concept of developing an environmental dry cleaning newsletter

Team Up With Local Government

- Encourage Alameda County Green Business Program to adopt the dry cleaning industry. If necessary, help ACGBP establish performance standards for "green" dry cleaners.
- Work with the cities of Berkeley, Oakland and San Francisco to incorporate "green" cleaners on "green" business maps. Build on the partnerships that EFC9 has developed with the cities of Berkeley and Oakland and that Ecology Action has developed with the city of San Francisco to solicit funding and assistance with green marketing of qualified cleaners.
- Review perc-reduction incentives used in Germany, Japan and the Netherlands, particularly at the local level to identify innovative approaches.

Building A Better Web Site

Many of our requests for help come through our connection with the EPA and our listing on their National website. Web "surfers" can then follow a link from the EPA National site to the EFC9 website on the Hayward University server. Unfortunately, the current EFC9 site is brief and of little value, and any further information must be gained through calling the Center. Recognizing that the World Wide Web is quickly becoming one of our best outreach tools, EFC9 is currently improving and updating our website to include a variety of links, databases and resources which reflect our outreach services as discussed above. This website will include the following services and links:

- Environmental Finance Directory (available for download);
- Environmental Technologies Available for Transfer From the National Laboratories;
- Upcoming EFC9 events such as Charrettes and workshops;
- Send Us Your Questions (A formatted page to collect questions and information on the companies that request our help.)
- White Papers, Reports and Annual Reports
- Monthly *EFC9 Update*
- Hotlinks (Links to other EFCs, federal agencies, venture capitalists, venture forums, angel forums and services, small business help pages, etc.)

Preparing a Pollution Prevention Finance Directory for Region 9

As a result of our success with the 1997 and 1998 Funding Directories, EFC9 will begin preparation of a new directory which will incorporate more than just basic financing for small environmental businesses. Following the original Directory concept, EFC9 will prepare a new directory which focuses on pollution prevention financing for both users and producers of pollution prevention technology. The emphasis of this new Directory would be California at the outset, and then, like the *Funding Directory*, would be expanded to include the other three states in Region IX. The methodology for these new volumes would be similar to the Funding Directory and would be as follows:

- Through magazines, journals, Internet searches, and interviews, provide the necessary background material for pollution prevention finance.
- Research organizations that provide help in pollution prevention at the private, state and Federal level. Provide a directory of these organizations.
- Include relevant appendices as well as a glossary of terms.

This new directory may concentrate on pollution prevention in general or it may emphasize a particular sector such as metal finishing or wet cleaning. EFC9 will work closely with Region IX staff in order to determine the best possible focus and methodology.

[Network Collaborations](#)

The following projects reflect EFC9's ongoing collaboration with other EFCs and the Network as a whole.

San Francisco Pollution Prevention Demonstration Project

As discussed above, the San Francisco Pollution Prevention Demonstration Project focused on the dry cleaning industry in the Bay Area. However, the Demonstration Project originated with a two-year EPA grant to the Great Lakes Environmental Finance Center (GLEFC5). One of the objectives of the grant was to:

Conduct two demonstration projects in Cleveland and San Francisco that integrate pollution prevention activities with local and economic development organizations, small business development, and industrial technology extension activities to increase pollution prevention deals. Financial strategies were considered to be an important component in the demonstration projects.

As a result, EFC9 became a subcontractor to the original GLEFC grant, and both EFCs worked closely throughout the duration of the project.

Metal Finishing Strategic Goals Program

The Metal Finishing Strategic Goals Program is a continuation of project that began with the GLEFC and EFC 3(Maryland). GLEFC participated on a panel of experts in a Metal Finishing Charrette on "Access to Capital" held in Washington DC in January 1997. The Charrette was organized by the EPA and the Maryland Environmental Finance Center. One discovery of that Charrette was the lack of finance available for Metal Finishers interested in implementing pollution prevention measures. As a result, a pilot loan program with the SBA was established. Because the pilot program was launched in Los Angeles, EPA invited EFC9 to participate in and help guide the Access To Capital Program.

Strategic Planning

Throughout 1998, the EFC Network has been working towards the completion of its first Strategic Plan. EFC9 has taken the lead in this effort by preparing and updating the plan for the EFC Network as the process has moved forward. EFC 9 anticipates completion of the plan by March, 1999.

Other Projects

EFC9 has also participated in the preparation of the Network proposal for Sustainable Urban Areas which was spearheaded by EFC3, and is currently involved in preparing the Committees section for the Network Bylaws.

[California State, Hayward EFC Organization](#)

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¹ A Charrette is best described as a problem-solving focus group.

² Approximately 80 percent of dry-cleaning plants use perchloroethylene or "perc". According to US EPA perc is a "probable human carcinogen". Consequently, various federal and state agencies are developing more stringent regulations to control its use and disposal. These same agencies are also trying to encourage reduced reliance on perc.

³ In California, dry cleaners must use closed loop systems. These systems allow clothing to be washed and dried in the same machine so that no perc is emitted into the air while transferring wet clothing between the washer and dryer. In addition, these machines can recover perc used during garment

cleaning for reuse.

⁴ Information on P2 alternatives should be provided as part of the business tax license process. There are numerous immigrant communities involved in the Dry Cleaning Industry in the United States, and many do not speak and/or read English fluently. In the San Francisco Bay Area, the majority of dry cleaners are of Korean descent.

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