

Clean Energy Initiative

*A Report on How
Foundations, State Funds, and Social Investors
Could Pursue Joint Investments*



PREPARED FOR

Rockefeller Brothers Fund
Surdna Foundation
Oak Foundation

PREPARED BY

Lewis Milford, Clean Energy Group
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Robert Sanders, The Reinvestment Fund

July 2003

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New Foundation Initiative	3
Elements of the Report	5
CEI Summary: Findings and Recommendations for State Funds, Foundations and other Social Investors	6
Background of the Clean Energy Initiative	7
Clean Energy Market Assessment	10
Clean Energy Investor Perspective	12
Interest in Collaboration	15
Foundation Options for Collaboration	19
Characteristics of Proposed Collaborations	22
Potential Collaborative Structures	28
Examples of Proposed Clean Energy Investments	32
Principal Recommendations: Framework for Moving Forward	33
Conclusion	34
The Authors	35
Footnotes	37
Appendix	39



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New Foundation Initiative

A year ago, three foundations, Rockefeller Brothers Fund, Surdna Foundation and Oak Foundation, announced the creation of the Clean Energy Initiative (CEI), a new non-profit project. In a letter sent to the nation's leading foundations, the philanthropic founders of this initiative stated:

“This project will investigate how to accelerate the commercialization and distribution of clean energy in the United States. The Clean Energy Initiative will explore the reasons why clean energy markets are not developing quickly, and will attempt to help create new opportunities to accelerate development. As one of its objectives, the Clean Energy Initiative seeks to understand what roles foundations, non-profits, and financing entities can play in advancing these efforts.”

“Foundations need to pursue ‘disruptive investing’—using their investment dollars to create new transformative change in energy.”

FOUNDATION OFFICIAL

“Just as states are now embarking on new clean energy strategies, we believe foundations have new opportunities to explore emerging tools that can help them bring about change in clean energy markets. The options might include traditional grants as well as investments and related options. We know that our activities to date have not been sufficient. We know we need to do more to leverage private investment in the building of domestic clean energy markets.”^{1/}

The initiative's founders supported three non-profit organizations to explore these options with other US foundations and new state clean energy funds.^{2/} Clean Energy Group (CEG), E+Co and The Reinvestment Fund (TRF) undertook a survey to gauge foundation and fund interest in joint investment opportunities in clean energy.

Over the course of the last several months, they interviewed officials from twenty-one (21) foundations.^{3/} The officials were asked about their experience with program related or other portfolio investments, their interest in new investment areas such as clean energy, and the circumstances that would influence their choice to invest in this area with state clean energy funds, or to collaborate in other mutually beneficial ways.





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At the same time, state funds officials were brought into the conversation. Officials from funds in states such as Massachusetts, Pennsylvania and Connecticut were asked about their plans for investment in clean energy projects and companies. They were asked whether they would consider leveraging their public investment with foundation capital. (Although the key audiences for this report are foundations and state funds, other social investors should be interested in this approach).

Collaboration Proposed

This report summarizes results of the survey, and proposes a collaboration of state funds, foundations, and social investors to explore joint clean energy investments as well as other related opportunities. It may be that some foundations are interested in joint investment, while others will consider some other form of joint activity. Still others will not find value in this effort.

We want to start a conversation about the options that might be pursued. It should focus on fundamental barriers and specific investment opportunities, as well as other initiatives that might involve a combination of investment, grant or other forms of support. Based on that conversation, foundations, state funds and other investors could then make practical decisions about whether they want to pursue a range of common interventions, including potential collaborative investment.

This report is designed to give state funds and social investors some basic information to decide whether such a conversation would be of mutual benefit. We propose several potential types of collaboration, but readers should only take these to be examples of those we consider worthy of discussion; real progress will come only after we meet and reach broad consensus on these or new avenues for collaboration. Given the urgent environmental opportunities and problems identified here, we suggest that such a process should begin soon.

“Community development and clean energy funds could benefit from a central ‘bank’ that could make available additional capital to invest in local clean energy projects.”

STATE FUND OFFICIAL



Elements of the Report

This report contains the following elements:

- **A summary of current circumstances, barriers and opportunities facing clean energy in the United States.** This assessment results from work through the CEI carried out by the Clean Energy Group, E+Co and The Reinvestment Fund based on extensive interviews conducted with foundations, state funds and investment professionals.
- **A description of the characteristics for a possible collaboration between state clean energy funds, foundations, and social investors.** This synthesis description grows from a desire by many of the parties interviewed to explore the potential of collaborative investment, which could be expanded to other social investors.
- **A framework for moving forward.** This framework presupposes that under certain conditions, a group of state funds, foundations and other social investors is prepared to engage in discussions about clean energy co-investment or other options. We suggest why this avenue might be of value, and why investment might be an option worth considering along with conventional grants. We describe the process for collaborating to positively effect change in clean energy.

This assessment results from work through the Clean Energy Initiative carried out by the Clean Energy Group, E+Co and The Reinvestment Fund based on extensive interviews conducted with foundations, state funds and investment professionals.





CEI Summary: Findings and Recommendations for State Funds, Foundations and other Social Investors



- Current trends in clean energy development in the United States, with only a few exceptions, suggest the strong persistence of barriers to widespread implementation. To overcome those barriers, there is strong interest in a collaboration of state funds and foundations—with the likely interest of other socially responsible investors—to accelerate sharing of knowledge and investment in clean energy companies and projects.
- The mechanisms for such collaboration do not now exist; they must be created. Work to create these collaborative tools must satisfy the myriad interests that drive action at these private and public institutions, each with different missions, decision-making processes and unique risk and reward profiles. One such action could include joint investment; in addition to or in place of joint investment, foundations and funds could engage in other forms of collaborative activity, including grant or other conventional forms of support. Investment is not the only preferred result, although that option is the principal reason for this investigation.
- Collaborative investment vehicles should allow for alternative types and forms of investments, ranging from one foundation investing with one state fund to a broader joint pool of state funds and capital from several foundations and other social investors.
- Regardless of the specific structure, any agreed upon collaborative investment vehicle should share important characteristics: financial leverage; risk reduction and efficiency; flexibility; realistic return expectations and transparency; manageable scale and timing; support services to improve the quality of investments; and, market development activities to increase the impact of the collaboration.
- It is proposed that a meeting of five to eight state funds and foundation representatives (as well as select social investors) take place during the next several months to determine if and how to move forward; co-chairs from respective investor communities should be designated; and preparatory work is needed to make the meeting successful.



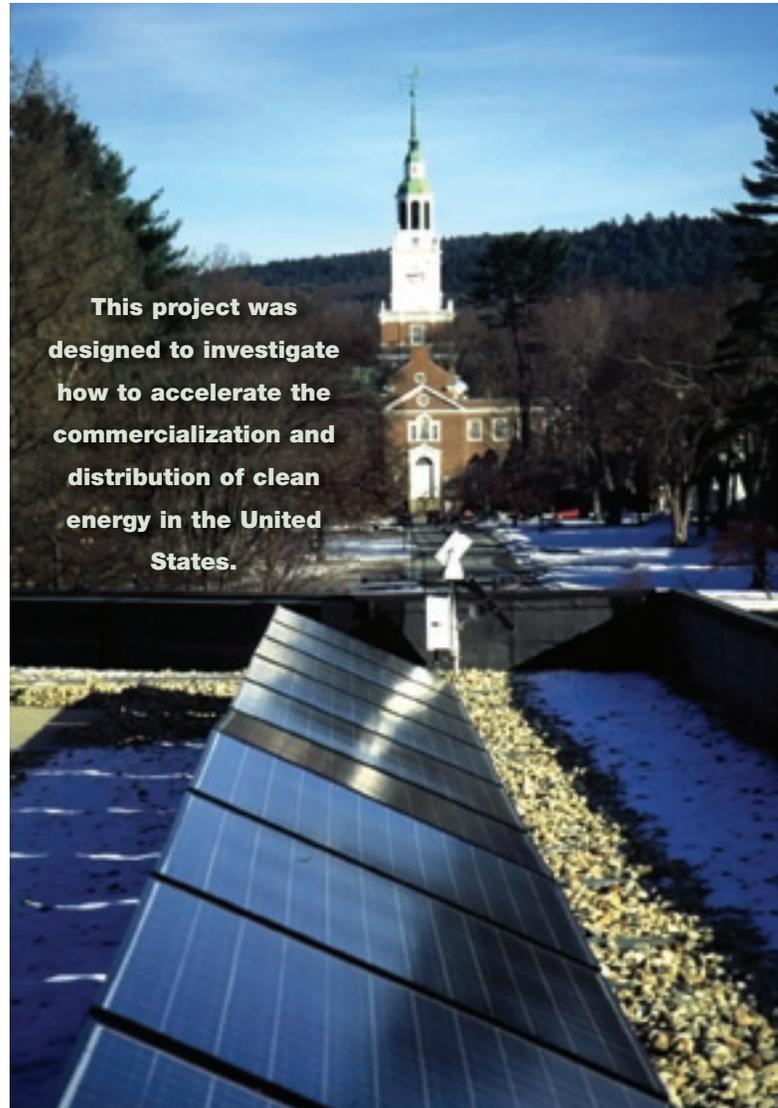
Background of the Clean Energy Initiative

In early 2002, Rockefeller Brothers Fund, Surdna Foundation, and Oak Foundation launched a new project, the Clean Energy Initiative, with the Clean Energy Group (CEG), E+Co, and The Reinvestment Fund (TRF). This project was designed to investigate how to accelerate the commercialization and distribution of clean energy in the United States.

In particular, the Clean Energy Initiative was created to explore the reasons why clean energy markets are not developing quickly, and what could be done to help create new investment opportunities to accelerate development. As one of its objectives, the Clean Energy Initiative sought to understand what investment roles foundations, non-profits, and financing entities could play in advancing these efforts.

The project approached foundations and state funds with this challenge. With the demand for clean energy growing, and the need for new tools to solve pressing environmental problems like climate change, our assumption is that we are at a critical stage in clean energy market development.

States are now making significant investments in clean energy through public funds dedicated to clean energy projects and market development. Twelve states now have such funding mechanisms. These state funds will generate over \$3 billion in clean energy funding over the next decade. States with these clean energy investment funds are now looking for new investment partners. Some of the state funds would like to work with other investors, includ-



This project was designed to investigate how to accelerate the commercialization and distribution of clean energy in the United States.

ing foundations, to combine public and philanthropic capital for clean energy.

In January 2003, one such fund, the Massachusetts Renewable Energy Trust (MRET), announced the creation of the “Massachusetts Green Energy Fund.”^{4/} With the support of newly elected Governor



This model represents a historic shift in the way we think about clean energy, a strategy that equates clean energy with sound economic development.

Romney, MRET created a new \$15 million debt and equity fund to be managed by an outside fund manager. The fund's operating mission is to "provide seed and growth capital and management assistance to Massachusetts-based renewable energy businesses having significant potential for growth, job creation and equity appreciation."

This new fund and an earlier fund created by TRF's Sustainable Development Fund^{5/} represent a new model in which public money creates a privately managed fund to invest in clean energy businesses. This model represents a historic shift in the way we think about clean energy, a strategy that equates clean energy with sound economic development.^{6/} It is a new and profound direction that could influence environmental and energy policy for years to come.

Most relevant to this CEI effort, the Massachusetts fund seeks investments from foundations and other socially responsible investors to leverage its public capital.

"It is important that the fund achieve a track record of success in order to attract additional investment into its portfolio companies. That said, there are two ways the fund manager is expected to attract additional capital. The fund manager is expected to provide its best efforts to raise capital from non-traditional sources of financing to build up investment resources in the Massachusetts Green Energy Fund. This non-traditional source of capital can come from socially conscious investing institutions and individuals, as well as from Program Related Investments (PRI) resources of foundations. In addition, the fund manager will be expected to leverage resources by attracting additional private investment within individual portfolio investments."^{7/}

In addition to Massachusetts and Pennsylvania, other state funds are also looking for outside foundation partners to leverage their clean energy investment capital. This is a trend that could grow across the country, if willing philanthropic partners were found.

Through this CEI investigation, we learned that non-profit institutions and financial intermediaries are looking for new opportunities to invest in clean energy, if the conditions were appropriate. Just as states are now embarking on new clean energy strategies, foundations could bring about positive change beyond traditional grants, through investment activity and related options.

From the larger global perspective, the timing for this kind of action also seems right. There is a growing recognition that state-level actions are becoming increasingly significant.

As with other major global problems,



a focus on practical, local solutions is an emerging international trend. From poverty alleviation to public finance, large-scale, top-down solutions often have proven disappointing. Targeted, local efforts have attracted a great deal of renewed interest as the key to more sustainable, durable progress. Academic disciplines are re-adjusting their focus to understand the real problems in the field.

A recent article in the *New York Times* on international global development described these contrasting approaches:

“Putting aside old, one-size-fits-all approaches to development, a new school of thought emphasizes more grassroots solutions.... To some extent, the field has been driven by abandoning big picture paradigms. The problems are different country to country and even region to region within countries. These big picture efforts are good for giving us inspiration, but probably not much good in making concrete progress within particular countries.”^{8/}

This trend downward, toward problem-solving at the state or local level, is becoming one of the more interesting developments in the clean energy area. The clean energy efforts surveyed here—and the investment opportunities they present—are part of this social trend.

These state clean energy programs do not rely on theoretical energy models or mega-solutions. If anything stands out, a hallmark is their connection to local market conditions, industries and opportunities. Their focus is on market-responsive strategies. States address the barriers to clean energy markets—the lack of businesses, financing constraints, contracting difficulties—and try to create practical solutions to overcome those barriers.^{9/}

With the new Massachusetts and Pennsylvania funds, states see clean energy as

an economic development strategy. Jobs, business development, and investment in clean energy join environmental progress as state goals.

To help solve these large clean energy problems through local, practical, investment oriented solutions, our survey of foundations and funds asked several questions:

- Do you think there is an opportunity for foundations to make grants or investments in existing or new non-profit financial intermediaries to finance clean distributed generation and sustainable energy projects over multi-state regions?
- Has your foundation made investments in clean energy development or in other environmentally or socially responsible market mechanisms? If so, what have you learned from such investments? What has worked and what has not?
- Are you considering investing in clean energy? If so, what information is needed to explore that opportunity more actively? If not, why not, and are there ways to encourage such interest?

This trend downward, toward problem-solving at the state or local level, is becoming one of the more interesting developments in the clean energy area.



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Clean Energy Market Assessment

Negative Trends

Many barriers to clean energy implementation in the United States persist, and arguably are getting higher. The well-known barriers faced by the clean energy industry are listed below. We are entering a period where certain additional negative trends are at work:

- Pro-domestic fossil fuel energy security arguments carry substantial countervailing weight.
- International greenhouse gas agreements cannot be considered a US market driver.
- Independent energy companies must improve their financial positions by lowering debt or raising cash, not by expanding activity.



The Big Five Business-As-Usual Barriers

- High Cost
- Technical Constraints
- Information Gaps
- Immature Market Infrastructure
- Uncertain Regulatory Framework

- The prospects for limited economic growth in the US reinforce the attractiveness of the business-as-usual energy system.
- Philanthropy faces a period of financial constraint.
- Capital from conventional energy investors is being largely absorbed to fund attractively priced transfers of existing assets.
- Energy has been re-positioned as an “adequacy of supply” issue rather than an environmental one.

Positive Trends

Working to offset these “negative” trends are a few positive factors yielding distinct opportunities:

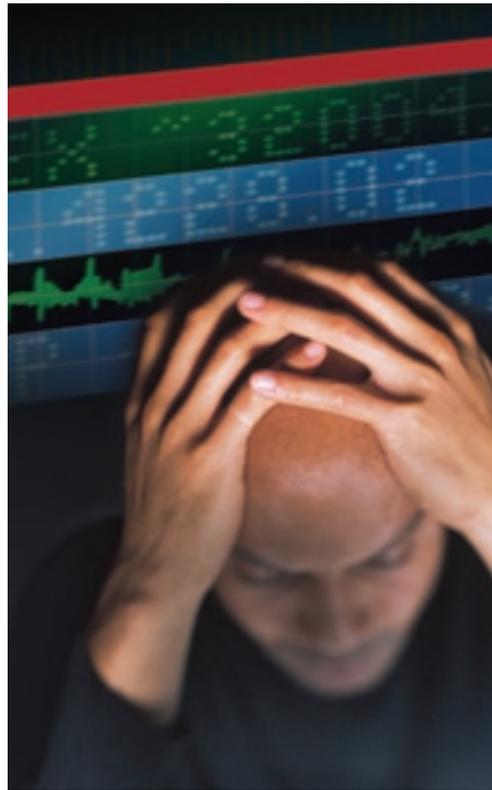
- Individual states have made commitments to clean energy development funds. A few of these states are aggressively seeking these and other policy strategies that create win-win (clean energy and economic development) outcomes.
- Selected products—wind, fuel cells, solar PV—are nearing commercial critical mass in niche market applications.
- The energy “independence” of home grown clean energy could become a powerful organizing principle to build markets in a security-conscious world.
- Opinion leaders at the sub-federal level in the US and Europe are showing increased interest in working together on market building and clean energy efforts.
- Within the fiscal constraints being faced, some US foundations are refining their climate change agendas to encompass the promotion of market-driven investments in the energy sector at the regional, state and local level.
- There is a nascent movement to “reinvent” clean energy advocacy toward smarter technological, market and policy experimentation—with foundations expanding the tools available to effect change.



This report is intended to begin to answer those questions. We try to chart a path toward collaborative strategies among foundations, state funds and other investors to bring about long term and durable environmental improvement through clean energy investment.

Because of foundations' current involvement in grant making in the energy area, we take as a given that foundations will continue their involvement in clean energy philanthropy. We do not underestimate the benefits of a conversation about new and expanded philanthropy in these areas, given the new partnership possibilities with state funds.

However, while we do not presuppose that foundations would also pursue a joint investment role, we do spend most of this report exploring that new opportunity, if only because it is such a new model for foundations to consider. During future conversations that we plan to engender through this report, we hope to discuss not only new grant areas but also investment options. In the process, if we are successful, we could create new models for how foundations and other partners advance a cleaner energy system with less environmental impact.



We try to chart a path toward collaborative strategies among foundations, state funds and other investors to bring about long term and durable environmental improvement through clean energy investment.

This report now turns to the barriers to action, the views from foundations and state funds about what is needed for a successful collaboration, and recommendations for moving forward together.



Clean Energy Investor Perspective

Industry analysts agree that clean energy could be the most significant growth sector in the medium term for US and European generation and energy investment markets, increasing 5–10 times faster than the fossil fuel sector.

To test the viability of these “positive” and “negative” energy industry trends, we interviewed key clean energy investors for their perspectives.^{10/} Their views confirmed these industry directions:

- In the last five years, there has been a massive investment in conventional generation capacity in the US and in Europe, primarily in combined-cycle, natural gas systems. The result is capacity overbuild, and downward pressure on energy prices that is expected to last for the next 2–10 years.
- As a result, industry analysts agree that clean energy could be the most significant growth sector in the medium term for US and European generation and energy investment markets, increasing 5–10 times faster than the fossil fuel sector.^{11/}

■ If this assessment is accurate, investments in clean energy could be the most active segment of the next wave of power sector expansion in the next decade.

■ This seems to be borne out most recently with the accelerating development of the US wind market. US installation of new wind power has risen from virtually zero in the early 1990s to over 1600 megawatts of installed capacity in 2001. Many new projects are under development, although most are heavily dependent on continuation of the federal Production Tax Credit.

■ Whether other central generation projects (biomass, solar) follow wind’s impressive lead will depend less on their technical effectiveness and more on (a) the availability of similar favorable regulatory treatment under various state and federal renewable requirements; (b) the growth of green power markets and utility green offerings; (c) new state “climate change” or renewable portfolio standards (RPS) commitments; (d) the success of various state clean energy funds described elsewhere in this report; and (e) bringing down comparative costs.

■ Another major market opportunity is “distributed energy”—customer sited energy projects where customers 1) demand power quality, security, cogeneration of heat or other site-specific needs, and 2) are able to make use





of otherwise wasted energy resources (landfill methane, for example). These are value-driven markets based on customer economics, not tied directly to regulatory or political actions.

- Demand for distributed energy is now satisfied by less-clean technologies such as diesel generators, gas turbines, combined heat and power or other combustion technologies. [Note that even in these cases, such technologies can have lower overall carbon emissions profiles than existing central power, as they are located close to the load and avoid transmission losses.] Over time, it is expected that cleaner distributed technologies such as solar, fuel cells and other similar systems could begin to penetrate these markets at significant levels. This will occur for many reasons, including technology improvement and energy security policy issues, but one of the key drivers will be the tightening of air quality limits on the use of combustion generators in the major areas of the country that are in violation of the federal Clean Air Act.
- Industry analysts expect the distributed energy market to grow substantially over the next decade. In particular, if one looks at the overlap of areas in violation of the Clean Air Act where energy demand is increasing, the North-eastern third of the country and California are prime areas for greater investment in distributed energy technology.
- This demand scenario has pushed equity players in the energy sector to double direct investments in key distributed energy technologies in 2002, with the focus mostly on commercial applications.^{12/}



Over time, it is expected that cleaner distributed technologies such as solar, fuel cells and other similar systems could begin to penetrate these markets at significant levels.

- In the European setting, where current climate change commitments are an indication of the investment picture that could face the US in the future if and when climate activities increase, we see calls for more attention to distributed energy as a means to achieve various greenhouse gas mandates.
- In one case, the UK Carbon Trust^{13/}, the British non-profit agency set up to invest in low-carbon technologies using the UK carbon tax, the principal technologies targeted for potential investment include fuel cells, typically in a distributed energy setting, hydrogen infrastructure investments and energy efficiency.
- Having reported this potential positive picture, the market is not without significant complicating factors. Renewable energy, especially central generation wind and similar technologies, is particularly dependent on policy support and



The combination of market, policy and public pressure suggests that we might be approaching one of those historical periods when a major market and investment shift is occurring.



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public funding. In addition, in many cases, historical regulatory structures that protect the ongoing power of utilities combine to thwart the growth of the clean, distributed energy industry. It is also true that there are technological improvements needed in fuel cells and related storage mechanisms to overcome customer concerns. Moreover, the higher cost of clean energy, compared to conventional fossil power, remains a major market impediment.

- One of the principal investor challenges is to aggregate deal flow from the typically smaller-sized clean energy projects, to bring in sufficient number of quality projects in aggregated scale to optimize the allocations of capital across these new energy ventures. Many investors are now exploring different investment vehicles to overcome these early market problems.
- But despite these challenges, the combination of market, policy and public pressure suggests that we might be ap-

proaching one of those historical periods when a major market and investment shift is occurring. Clean energy could be a large market growth opportunity over the next decade both in the US and in Europe. While uncertainties will remain about which market segments are most likely to achieve the most rapid growth and in which time frames, achieving greater greenhouse gas reductions inevitably will necessitate greater investment in clean energy.

- Given the opportunities and obstacles, many key investors are adopting a highly conservative, “wait and see” approach to the sector. But a few pioneering firms are already working with a flexible investment strategy to build a portfolio of clean energy technologies and companies. These include: (1) on-grid wind, biomass, geothermal plants; (2) distributed generation in the power quality and reliability area; (3) combined heat and power; and (4) landfill gas and related projects.^{14/}



Interest in Collaboration

Against this industry and investment background, we interviewed foundations and state fund officials about possible collaborative investment approaches in clean energy.

State funds and foundations expressed interest in various forms of collaboration that would accelerate clean energy investment. But it was less clear what each party saw as the essential characteristics of such collaboration, or how joint investment could be structured.^{15/}

“We should act”

The notion that foundations should look seriously at clean energy investment to bring about global environmental change is a new one. It comes about largely because the new group of state funds did not exist until a few years ago. There are now new opportunities for foundations to effect social change with these public investors. As a result, no one has ever proposed this set of options before, and few had easy answers about how they could work together.

However, overall, there was a remarkable degree of excitement for developing strategies to bring about this investment collaboration.

Many funds and foundations seem to have reached the same conclusion: if we could figure out how to do joint investments in ways that work for our respective institutional missions, we should.

Our assessment is that a group of five to eight state funds and foundations have sufficient interest in this approach to justify the development of a model for joint

investment. Such a partnership could, over time, also be useful to a broader group of institutions that do not believe this area is one they want to explore at this time.^{16/} And, this effort could enlist other national foundations, local or regional foundations, and other socially responsible investors to support joint investment with state funds as an attractive option.

During our survey, the following basic question was addressed to a cross-section of state funds, foundations and professional investors:

“Under what circumstances would state funds and charitable foundations collaborate to make joint clean energy investments?”

Many funds and foundations seem to have reached the same conclusion: if we could figure out how to do joint investments in ways that work for our respective institutional missions, we should.





“Foundations need to pursue ‘disruptive investing’—using their investment dollars to create new transformative change.”



Foundation Comments

The reactions from foundations are represented by the following remarks, paraphrased here:

“Investments with state funds could be an interesting place for foundations to arrive at a comfort level of investment, with fund managers who have a track record, for a limited period of time, perhaps five years. This could be a strong value proposition.”

“New organizations with business, investment and policy skills are needed in the clean energy area; if such an organization could create a new investment pool of \$40 million or so, with a lower rate of return (3%), hitting the double bottom line (financial and social returns), which would bring about significant market activity, foundations should be interested.”

“This activity could create a new toolkit for foundations beyond conventional grant making. Right now, we do not have all the tools we need to meet the problems.”

“Foundations are much more likely to act if they act together—we need to create breakthrough activities that solve problems through some combination of business and philanthropy.”

“We need to make the case for this effort—there’s a new problem to be solved (clean energy); there’s a new solution (state funds, markets and foundations); but these solutions are underfinanced and there’s a lack of coordination and participation by funds and foundations serving as joint investors. We need bold new approaches to solving these pressing global problems.”

“Individual PRIs can be painful to do, and we have had unfortunate experiences with them. We do not have the expertise to make smart investment decisions on our own. But if we had partners with expertise like state funds, we could be more interested in joint investment.”

“Foundations need to pursue ‘disruptive investing’—using their investment dollars to create new transformative change.”

“To date, no one has made it easy for foundations to do this—foundations need a ‘comfort structure’ to reduce the risk in such investments.”

“We have done ‘gold plated PRIs’ in land deals for conservation. We would need to make some significant decisions to take on more risk.”



“For any portfolio investment, we need much more specificity about the nature of the investment.”

“Going it alone with a foundation investment in a single state fund might be too politically risky, given the dynamics of local politics influencing fund decisions by states. A pooled approach of several states and foundations that reduces this political risk of single-state funding might be more attractive. A dispassionate investment process not linked to any political entity is best.”

“This could be an interesting way for foundations in the same state or region to act together on clean energy with state funds in the area. It could be an organizing principle for joint philanthropy that serves economic development.”

“Clean energy is on the horizon. Our foundation should be doing this. A pooled approach is preferable.”

“We are making foundation investments in forestry protection. We should be making the move to making investments in clean energy.”

“We are interested in economic development investment opportunities that overlap with environmental protection. This seems like a good community-based approach to link those goals.”

“We have an interest in early stage technologies to take advantage of increased demand for clean energy. But the key issue is that we would have to co-invest with another entity that had substantial experience with due diligence. Perhaps state funds could pass that bar, although

it would be better to have private fund venture capital expertise involved as well. A pooled fund approach, with state funds and private fund management expertise, could get us over those hurdles.”

“Foundations are now looking for a high degree of certainty in their investments given the market declines. However, perhaps lower, more certain returns are the right approach in this market.”

“In any case, foundations should be interested in grants to advance this notion, to go alongside with investments by other foundations; a portfolio approach to foundation investments and grants is needed.”

“Clean energy is on the horizon. Our foundation should be doing this. A pooled approach is preferable.”





“While we have competitive economic differences, there should be some commonality to this direction.”

State Funder Comments

From our discussion with a group of state fund managers, we heard the following observations, again paraphrased:

“We would be interested in leveraging our public dollars with foundation investment if an appropriate match were found.”

“We are concerned about any “pooled investments” either of state funds or foundations, since we are unlikely to put our capital into the hands of third parties.”

“Perhaps local foundations interested in matching their investments on a one-to-one basis with state funds would be an appropriate approach.”

“A pooled investment of funds and foundations is worth exploring, since we would like to leverage our work with other state funds, and see a value in a non-profit intermediary to serve some support functions.”

“Community development and clean energy funds could benefit from a central ‘bank’ that could make available additional capital to invest in local clean energy projects.”

“While we have competitive economic differences, there should be some commonality to this direction.”

“To avoid duplication of numerous services needed to perform due diligence and related functions, it would make sense to create some joint institution to support our actions.”

“Other than foundations, we need to bring in other private investors, including the social investment network.”

“This is a complicated story, with new funds figuring out how to create investment arms along with their program functions; at the same time, it would be timely to share this learning process with foundation leaders in clean energy. We are in this together, and we could learn from each other about how to build this market.”

Conclusions to Proceed

These generally positive reactions from foundations and continuing conversations with state fund managers lead to some inescapable conclusions about the opportunities present in this area. At the same time, the negative reactions pose challenges that this effort must overcome to be successful.

The next section summarizes the range of foundation tools available to take advantage of the opportunities and then meet the challenges ahead.





Foundation Options for Collaboration

Foundations can employ a variety of tools to influence the energy sector. In the US energy sector, the principal tools receiving foundation support include, among many others: (1) policy advocacy (influencing public policy through intermediaries who promote either public purpose programs, utility or state sponsored incentives, or mandated requirements—e.g., portfolio standards); (2) education (promoting the benefits of clean energy, energy efficiency); or, (3) direct assistance to the poor (fuel purchase and weatherization).

With the advent of more innovative state fund mandates, the opportunity may exist for the foundation community to become more active in bridging the gap between the purely philanthropic and the purely commercial in ways that go beyond—or at least supplement—these and other more conventional tools.

The “space” (as venture capitalists like to call it) between the purely charitable and the purely commercial is quite wide (*Figure 1*). It occupies the territory bounded on one side by gifts and 100% grant activities such as consumer and youth education, policy advocacy and direct assistance to the poor. Its other boundary consists of private sector-financed investments and commercial finance, as well as all the related tools such as insurance and risk management techniques (e.g., guaranteed maximum price engineering, procurement and construction contracts).

In between are numerous activities neither pure grant in nature nor pure commercial investment. In this space there are



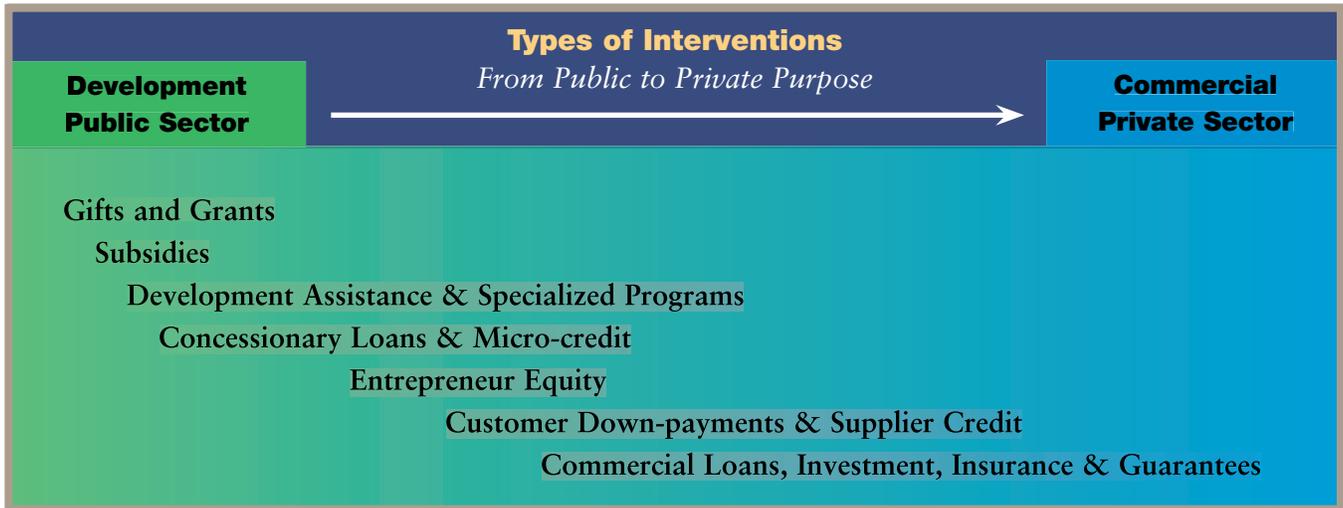
With the advent of more innovative state fund mandates, the opportunity may exist for the foundation community to become more active in bridging the gap between the purely philanthropic and the purely commercial.

numerous charitable purposes that can be satisfied by techniques other than traditional grant making. While this is new in many respects to the US energy sector, it is well-trodden ground for other sectors (such as community development and housing).^{17/} It is this experience that offers new possibilities for the exploration of joint activities between foundations, state clean energy funds and other social investors.^{18/}

Figure 1 illustrates the continuum between the purely grant oriented and the purely commercial. It suggests a variety of interventions, including direct subsidies to stimulate a market (by encouraging new customers, new competitors or cost reductions)—subsidies that are expected to be



Figure 1



This report is designed to encourage foundations to join a conversation about the arguments for these interventions and whether they want to use these new tools with new partners, the state clean energy funds.

temporary in nature and “smart” (versus market distorting) in implementation. These subsidies can be direct (e.g., a production credit, investment tax credit or customer rebate) or (as we move along the continuum) in the form of development assistance or specialized programs. Such specialized programs have the same objective as direct subsidies: to encourage new entrants in the marketplace (new companies or technologies or other interventions within a market area, new companies coming to a previously unserved or under-served market area).

Whether through direct subsidy or the provision of specialized services, the criterion by which to measure the public and charitable purpose achieved (and thus the criterion by which foundations must evaluate the appropriate level of involvement) is the same. That is, does the activity supported have an environmental, developmental or poverty alleviation benefit that more than justifies the commitment of scarce resources or does the cost substantially outweigh the direct, private benefit to the recipient?

Sometimes the barrier to new entrants does not require subsidy or direct development assistance. Sometimes the problem is

not one of cost but of access to resources. A concessionary loan may have the same cost as a commercial one but the recipient may lack access to the commercial loan. Lack of track record, newness of technology, newness of market, lack of collateral—all represent barriers to entry. Assistance could improve the quantity or quality of energy being produced and consumed. Micro-credit and so-called “soft” window investments in companies can also provide access to financial resources.

What are some of the tools foundations (and foundation-state fund alliances) could bring to the space between pure grant making and pure commercial investment?

- Dissemination and promotion of information on market entry opportunities.
- Training and tools to assist market entrants.
- Cost sharing of or access to market penetration studies and preparation.
- Assistance with project planning and the encouragement of new entrants to become interested.
- Assistance with business plan and investment proposal preparation.



- Accessible credit lines for new entrants or for customers.
- Access to interested investors or lenders.

What are some of the purposes to be achieved by such interventions?

- New entrants to stimulate competition and greater product access for the public.
- Cleaner air, water and global commons.
- Economic opportunity (creation of jobs, investment and taxes).
- Poverty alleviation and access to services by the presently under-served.

Having listed these potential interventions, there are good arguments for taking

such actions. What are some of the arguments for an intervention?

- Clearly defined technological, participant, information or intermediation gaps.
- Too little interest by conventional investors and lenders in an otherwise significant public purpose opportunity.
- Insufficient access to finance by potential customers and entrants.
- Creation of economic opportunity.

This report is designed to encourage foundations and others to join a conversation about the arguments for these interventions and whether they want to use these new tools with new partners, the state clean energy funds.





Characteristics of Proposed Collaboration

Based upon these industry, investor, state funds and foundation perspectives, we identified several distinct elements of any successful investment collaboration between state funds and other social investors.

Out of the range of these possible tools, we now focus on potential joint investment. Based upon these industry, investor, state funds and foundation perspectives, we identified several distinct elements of any successful investment collaboration between state funds and other social investors.

Characteristic No. 1: Financial Leverage, Risk Reduction and Efficiency

There exists a general interest in increasing the amount of financing available, sharing the costs and spreading the risks of investing in clean energy.

Of course, this investment does not mean collaboration will be easy to design. Beyond confirming general investment interest, determining what vehicle to use to bring about those benefits and satisfy

the various interests of foundation and funds remains the major challenge.

Pooled Investment

One option discussed was the possibility of multiple entities either joining forces in an investment pool or co-investing “side-by-side” on the basis of pre-agreed underwriting criteria. This could be accomplished through a multi-state or regional collaborative of state funds. Or it could be a vehicle where foundations invest one-on-one with one or more state funds. Either is a possible way that public and philanthropic capital could be leveraged to create a larger clean energy market.

In the case of the “pooled” approach, one entity—existing or new—could manage the process for a number of entities, bringing specialized expertise to the joint activity (highlighting a consensus that with the exception of technology development transactions, there exists very limited expertise in actually making investments in and providing services to clean energy companies and projects and that such expertise is quite specialized).^{19/}

Discussions with some state fund officials emphasized the possible advantages of such a joint effort. These include efficiency in investment identification, screening, approval, asset and portfolio management, and the potential of co-financing and risk sharing. It seems that some of the state funds are seeking all of these collaborative advantages, while others may want primarily to share leads and be able to co-invest with other state funds.





There are of course limits to such collaboration (normal interstate competition for economic development activity, a lack of flexibility in authorizing statutes, a wide diversity of in-house investing and lending capacity among state funds). But there was general agreement that clear advantages might emerge through a merger of public and foundation investment.

Single State Model

On the other hand, some funds are not interested in any joint investment with other state funds. They would prefer a state-specific investment fund, such as the Massachusetts Renewable Energy Fund noted earlier in this report. In that case, foundations could still be approached to match investments with a single state fund, or with multiple funds, but not through any shared vehicle. However, in that case, the benefits of shared investment, and the preferences for foundations in the risk reduction role of pooled investments, as noted next, would not be optimized.

Foundation Interests

Foundations were particularly interested in three benefits of investment collaboration with state funds:

1. Decision-making on investments that takes account of a broad range of opportunities, professionally vetted and independent of partisan politics or favoritism.
2. The possibility to achieve public benefits across larger geographic areas.
3. Incorporation of support activities (public education, market building) that increases the likelihood of a more systemic societal change.

Both funds and foundations are looking for new vehicles through which joint investments can be made. Whether those



vehicles allow for several funds to work together, for several foundations to co-invest with funds, for private investors to participate, or for single funds to leverage public dollars with one foundation is of little consequence. If financial products on a regional basis make sense, that should be pursued. If a single state model is of value that is an equally acceptable alternative. Each could complement the other.^{20/}

In any case, the terms and conditions for joint activity must be established to allow for any combination of beneficial joint action to take place.

Characteristic No. 2: Flexibility

To accommodate diverse interests, any investment effort must be flexible enough to address a menu of needs and objectives.

State Interest

States are seeking their particular versions of the Triple Bottom Line (financial, social-economic, and environmental

Both funds and foundations are looking for new vehicles through which joint investments can be made.



There was universal recognition that any investment in clean energy is not a purely commercial activity.

returns). For some states, that might involve only investing in state or regionally-based clean kilowatts delivering clean kilowatt-hours to local ratepayers. For others the mandate may be to create clean kilowatt-hours and stimulate jobs and investment related to clean energy manufacture, service or finance. For still others, success might allow the stimulation of new markets outside the state that add expertise, jobs, investment, wealth and taxes by growing a corporate venture or financing function. It is within the menu of these differences that common ground and a flexible structure need to be found.

Foundation Interests

Foundations want these activities to cause a fundamental shift in how the US produces and consumes energy. From an investment perspective, it is important for foundations to reduce transaction risks through a collaborative effort, and to find an agent with a sufficient track record and experience to shift the burden of evaluating project risks and rewards. Which

vehicle—single state or pooled—serves those interests will determine whether they would make the ultimate decision to join in an investment with a state fund.

If structured properly, a vehicle with expertise and skills in clean energy investment also could bring to foundations a valuable new resource to assess clean energy philanthropic endeavors. That is, foundations could use this investment vehicle as a learning tool to educate themselves about other clean energy opportunities for philanthropic activity.

Overall, the implementation of this new effort must prove itself capable of dismantling the critical barriers to achieving replication, not simply creating an investment portfolio. At the same time it must serve the critical institutional needs of foundations for broad-based environmental improvement, risk reduction, simplicity, education and investment security.^{21/}

Characteristic No. 3: Realistic Return Expectations, Transparency

There was universal recognition that any investment in clean energy is not a purely commercial activity.

Single Digit Returns

Return and risk expectations must accept the immaturity of the market and the barriers to be cleared. The landscape is littered with representations that high teen and low twenty percent returns on equity and “belts and suspenders” project financed debt are appropriate to this sector. The reality is quite different, especially if viewed through the lens of an equity investor requiring a clear exit strategy.

Social investment returns in the single digit range are the appropriate targets for this stage of the clean energy market.





Given this unique market, traditional credit investment or venture capital criteria will not be satisfied. This means that while the same due diligence requirements must be rigorously met, the underlying standards for evaluating projects will be different from conventional venture capital. Through the collaborative approach discussed here, foundations and state funds could work together to develop shared standards for these investments.

For a collaboration to succeed there must be clear, transparent agreement on the different metrics to be employed to evaluate investments in this market, as well as the services to be provided and costs to be absorbed outside the investment envelope.

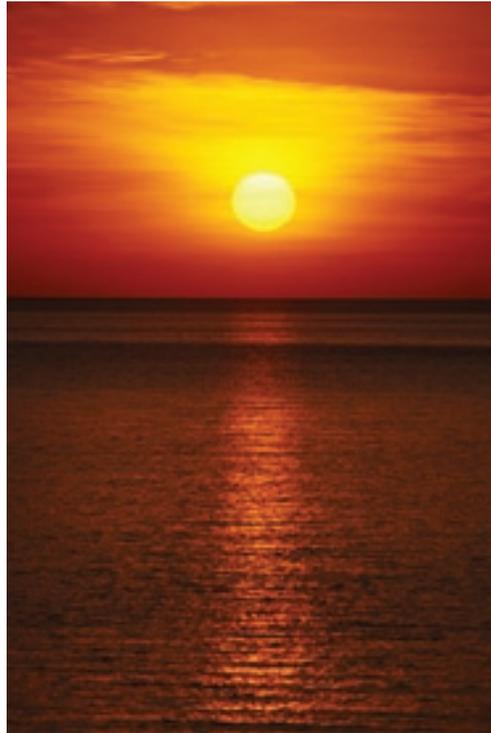
Characteristic No. 4: Scale and Diversity of Investment

Investment in clean energy is generally viewed as involving the provision of seed and growth capital to a mix of companies and projects that meet the objectives of the states, foundations or other social investors.^{22/}

Specific Terms

Founding investors in a collaborative would expect to set the standards, investment guidelines and management structure and create a framework that allows expansion in the future. Important here would be advance agreement on the portfolio to be assembled; specifically, what portion of the portfolio would be in traditional investments (e.g., grid connected wind farm) versus more “pioneering” clean energy companies and projects (e.g., first of a kind stationary fuel cell installations for assured power).

Again, it is unclear about whether a new mechanism or some other less formal structure would be the best way to accomplish these goals.



For a collaboration to succeed there must be clear, transparent agreement on the different metrics to be employed to evaluate investments in this market, as well as the services to be provided and costs to be absorbed outside the investment envelope.

Investments Ends

To underscore this point, it will be important to make decisions about the investment ends—project finance or company investments, or some combination of the two approaches. In some cases, it may be necessary to make the decision that the investment vehicle uses both.

In either case, it is important to note that we propose consideration of foundation investments from both program-related (grant) investments, as well as from the portfolio side of foundations. In the case of portfolio investments, new challenges are presented, including how such investments could satisfy traditional investment criteria.

Level of Investment

“Critical mass” was deemed to be a reasonable amount that three to five to eight participants could achieve. A number of possibilities exist about the amount of capital needed.



Through an incremental approach, a state fund might have an interest in bringing \$1 to \$3 million (or a similar modest level) in additional capital from foundations to co-invest with the state funds' portfolio.

A combination of local or regional foundations could pool investment to reach that level.

A more aggressive approach would raise more foundation investments. Some figures cited involved a total investment pool of \$30 to \$50 million. The underlying principles would be investments that yield agreed-to levels of financial return, socio-economic dividends and environmental benefits.

Obviously, some combination of incremental and aggressive approaches could be achieved. How to test foundation interest in these approaches is a critical feature of the conversation we plan to have with foundations and state funds.

Additional Non-Investment Support Needed

However, it was felt that to identify, nurture and successfully invest in certain companies and projects—companies and projects that could essentially redefine the clean energy landscape—additional non-investment support is required.

That is, even with foundation investment, it seems necessary to consider expanded grant-related activity to bring about these joint investments. Such “soft” support is important to help both foundations and funds act more constructively together.

Examples of Support Services

- Technical assistance in siting and interconnection.
- Market analysis and forecasting.
- Investment proposal and project information memorandum preparation.
- Financial analysis and negotiation with suppliers, lenders and others.
- Documentation for regulatory and siting purposes.
- Independent evaluations.

Characteristic No. 5: Support Services

Therefore, almost without regard to whether foundations and state funds co-invest, there is a need for additional support services. There is a benefit to creating a greater pool of energy projects and to provide expert services to bring about better public and philanthropic decisions on clean energy market development, investment, and implementation.

This section sets out some tentative opportunities for increased grant related activity from foundations.

Create Pipeline

Enterprise and project support services would involve the provision of tools, training and business development services and the development of a pipeline for the investment “window.” An adequate investment pipeline for this effort is not going to come “over the transom” via unsolicited proposals or responses to requests for proposals. Substantial preparatory work is going to be required in many instances, as is usually the case with innovative, public benefit investing.^{23/} This might be especially true for “pioneering” projects and companies.^{24/}

Best Practices

Activities in this category would seek out, test and disseminate best practices in the growth of clean energy enterprises as progress is made. Support services could involve a variety of assistance to companies and projects (*See box, left*).

Capacity Building

Either through existing or new organizations, state funds and foundations could use capacity building in these areas, with expertise possibly shared over a larger regional area. A central organization



could serve as a conduit to provide technical assistance to funds and foundations, educated by local conditions.

Some of this collaborative work will be undertaken with state funds through the Clean Energy States Alliance (CESA)^{25/}, a new non-profit organization, that will assume much of the state funds work undertaken by Clean Energy Group^{26/} and its Clean Energy Fund Network (CEFN). A series of cooperative, state fund activities and projects are planned through this new organization.

Characteristic No. 6: Market Development

To round out the potential for collaboration, it has been suggested that advocating for effective change in the clean energy marketplace can pay substantial dividends. This would include information development as well as policy and regulatory reform directly linked to market expansion and investment implementation.

Transfer of Market Knowledge

The underlying principle here would be

to accelerate the maturing of the clean energy market, sharing lessons learned and best practices among active participants.

Identifying and sharing best practices not only among states in America, but with European and overseas experts—increasing the size of the intellectual, not to mention commercial, envelope—is one example. This work—largely the transfer of practical market knowledge—would be intended to complement and support local and state market development efforts, producing practical benefits rather than trying to substitute for any existing state programs.

This is an area where a central organization could serve important objectives shared by both funds and foundations.^{27/} For this reason, the market development function should offer participating states, foundations and social investors a menu of opportunities for local interpretation and participation, rather than a “one-size-fits-all” prescription.

In either case, this function is critical to expand the range of clean energy activity for all social investors—whether or not co-investment options are explored.

The underlying principle here would be to accelerate the maturing of the clean energy market, sharing lessons learned and best practices among active participants.





Potential Collaborative Structures

We offer some alternative structural models from other public benefit areas. These could serve as examples of how state funds, foundations and other investors could work together on clean energy.

With these principles in mind, we offer some alternative structural models from other public benefit areas. These could serve as examples of how state funds, foundations and other investors could invest and work together on clean energy.

Retain specialized clean energy project investment expertise to screen, groom, structure and present enterprise or project investment opportunities to a group of collaborating investors under a formal mechanism. E+Co and the Solar Development Group (SDG) are examples of this arrangement. E+Co manages funds on behalf of lenders and donors, under agreed-to investment criteria. Some are commingled, some are segregated (e.g., the Multilateral Investment Facility managed by E+Co). SDG is two related organizations: Solar Development Foundation, a non-profit that tees up investments in solar companies and Solar Development Capital, which makes commercial investments. The Renewable Energy and Energy Efficiency Fund (REEF) was also a fund organized around specialized expertise (large, grid-connected; small, grid-connected; off-grid and efficiency). Despite its shortened life as a fund (which resulted primarily from broader emerging market risk perceptions), REEF is still a valid model of a market development mechanism to invest in clean energy (combining soft and commercial return expectations with project/enterprise development services).

Grant Funded Equity. Under this approach, a foundation or number of foundations provide grant funding to a newly established non-profit investment fund. It would focus on clean energy. The fund would be managed by professional managers and program experts for capital preservation. The fund could be used for solutions using a variety of investment tools, from grants to loans to equity. This innovative “venture philanthropy” concept has been advanced by the non-profit Conservation and Community Investment Forum to give foundations new tools in other social change areas.^{28/}





© NREL

This is a relatively straightforward model, whereby the interested foundations, state energy funds and other investors would agree to investment guidelines, targets and investment amounts.

Create for profit investment fund with non-profit partner. The Nature Conservancy, a non-profit organization, created a for-profit investment fund, the EcoEnterprises Fund. The fund offers venture capital to environmentally conscious companies and projects, with an early focus in Latin America and the Caribbean. The target markets include sustainable forestry and eco-tourism. Foundations and private industry have funded the effort, which is in its early stages.^{29/}

Create what one participant called a “central bank” (a dedicated service provider to and clearing house for participating states and foundations).

The distinction here is that the service and investment entity would be limited to serve only its sponsors, who would pay the operating expenses of the entity under a tightly structured contract. Going back in time (1990–1994), this is the relationship LaRocco Associates (LA) had with the Rockefeller Foundation (RF), wherein

LA was de facto the program officer for the foundation’s international energy program in all but one respect: grant-making and investment decisions required formal approval by the foundation. For a period of time LA’s international energy work was limited to providing this service to the RF. As a result of the experience gained through this relationship, the foundation decided to spin-off the body of work and fund for five years an independent entity, E+Co. E+Co is a dedicated entity providing services and investment to the clean energy sector in developing countries.

Create a targeted investment pool, or a single fund, independently managed.

This is a relatively straightforward model, whereby the interested foundations, state energy funds and other investors would agree to investment guidelines, targets and investment amounts. A fund manager could be selected through a RFP process. The fund manager would recommend project and fund-to-fund investments to



It is common in the private venture capital world for a group of investment firms to form joint ventures to support and share investments in projects and markets.

an Investment Committee, comprised of a select number of investors. The Board would also be comprised of the investors.

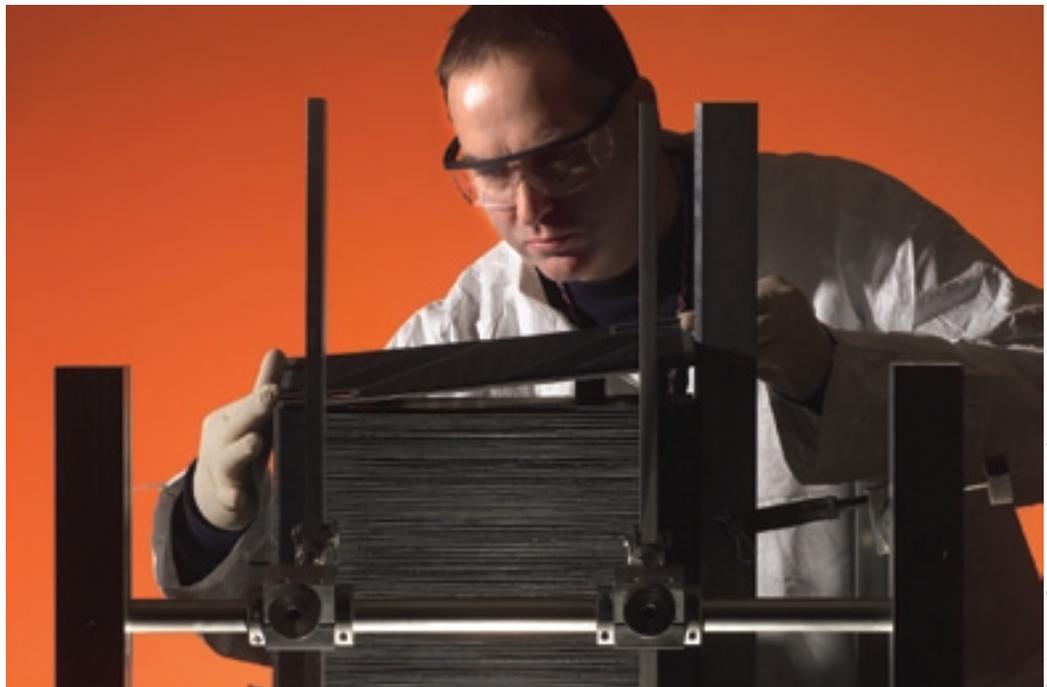
Private venture capital partnerships are good models for public capital joint venture partnerships.

It is common in the private venture capital world for a group of investment firms to form joint ventures to support and share investments in projects and markets. One such venture is Chrysalix, a Vancouver based partnership that invests in new fuel cell and hydrogen companies. Chrysalix was formed by Ballard Power Systems and Shell Hydro, and later joined by the BOC Group, BASF Venture Capital and Mitsubishi.³⁰ Working on behalf of its client investors, it provides early stage companies with expert services, technology knowledge, organized networking with industry and experience in the management of intellectual property. This common vehicle of joint ventures is new to the public capital world, where state and other public investors have yet

to form investment partnerships. As the public investment model for clean energy matures, it seems natural that it will gravitate to models now common in the private sector, with some obvious modifications to satisfy unique needs of public funding entities. Such a vehicle could also be an appropriate way for foundations to join with public funds in common investments.

Organize an active enterprise or project search firm.

Funds and fund managers do this on occasion. Environmental Enterprises Assistance Fund (EEAF) uses firms such as Eenergy (a private sector consulting and energy efficiency developer) to identify candidate investments. This involves a retainer, cost recovery and a success fee. In the case of PVMTI (an International Finance Corporation (IFC)-GEF funded program to invest photovoltaic opportunities in Morocco, Kenya and India) a British firm, Impax Capital, entered a long-term contract to find and manage investments on behalf of the World Bank/



Courtesy of United Technologies Company



IFC but the IFC still retained control of the investment decision. This can also be done collaboratively (a combination of #1 and #2), as in the case of Al Tayaar (a UAE-based clean energy development company) and E+Co. Both invest in developing country clean energy enterprises. Each identifies deals for the other. No fees are exchanged, but expenses and the cost of time are sometimes reimbursed. Such a search firm could present its deal to a formal collaborative structure, or individually to the interested parties, depending on investment criteria (e.g. technology, region, size) established previously.

Develop co-financing underwriting criteria and “subject to” commitments for joint investing and agree upon a coordination mechanism or body, if needed.

This is a fairly common practice among commercial and development banks, sometimes referred to as A-B loan programs because one institution (A lenders) offers certain terms (usually more concessional) on condition that other institutions (B Lenders) fill out the package. Equity can be added to a package also. The A/B loan structure is a well-established mechanism for development assistance. It has been a cornerstone of international donor assistance to commercial enterprises for a generation, with the World Bank leading the way, and more than a half-dozen other major development agencies following.



Part of the success of this project was the World Bank’s efforts to improve the investment climate and to encourage new investors to investigate the potential business opportunities. These steps could prove equally useful in the clean energy case, whereby collaborative efforts have enhanced the investment climate (e.g. eroded the fundamental knowledge and regulatory barriers) and opened up new opportunities or better educated the investment community about them. The foundations, state energy funds and other investors could seed the developments that would pull commercial lenders into future deals.

These are but a sampling of options for investment collaborations. In all, the common theme is the same: to succeed, any new initiative must involve states, foundations and social investors with fundamentally compatible objectives and philosophies, provide a range of flexible opportunities for participation, and be flexible in the products and services offered.

To succeed, any new initiative must involve states, foundations and social investors with fundamentally compatible objectives and philosophies, provide a range of flexible opportunities for participation, and be flexible in the products and services offered.



Examples of Proposed Clean Energy Investments

Finally, so that we are clear about the objectives of potential co-investment between state funds, foundations, and other investors, here are a few illustrative examples of the kind of specific projects that could receive joint investment.^{31/}

In each case, the lower rate of return expected by the investment of public and philanthropic capital makes the clean energy deal more financially attractive to pursue.^{32/}

Solar company: A solar PV company needs \$750,000 in working capital to expand sales and markets to serve a broader geographic area. The terms of the investment require \$500,000 from state funds structured as equity capital and \$250,000 from foundations structured as a secured line of credit loaned through the state energy fund or its designee.

Wind project: A wind developer wants to expand operations to new states and needs flexible project financing for a 30 MW wind power project in the East. The \$40 million project requires 40% equity investment (provided by the ultimate project owner/ investor), 45% senior debt (institutional wind project financing source) and 15% subordinated debt (\$6 million, at 5–7%, ten years, funded in equal parts by foundations and state funds).

Green low-income housing: A 50-unit low income housing project financed by a community development finance institution wants to increase its energy efficiency and add on solar panels to generate clean energy on site. The project needs \$1,000,000 in additional capital to make the project financially viable. The developer needs \$625,000 in solar PV system rebates (funded by state funds) and \$375,000 in a low-interest secured loan (funded by foundations and loaned by the state energy fund or its designee).

Fuel cell project: An energy services company has a commitment from a biotech laboratory to install fuel cells, but the laboratory does not want to own the technology. The energy services company must develop a business model where it owns and operates the fuel cells and sells the power to the laboratory at a premium price. The services company (ESCO) is looking for flexible capital in the amount of \$2,000,000 for the project. The state fund provides capital (funded in equal parts by foundations and the state fund) to the ESCO to install the fuel cell on the laboratory premises. The ESCO and the laboratory enter into an energy performance contract agreement in which the state fund is a third party funder. The state fund is assigned a secured first lien position in the fuel cell as well as an assignment of the laboratory's monthly service fee payment (debt service). Payments are made directly to the state fund. At the end of ten years, the laboratory has the option to buy the fuel cell at its residual value (15–25%) or continue payments under an extended agreement.

Market development support: Apart from specific investments in projects or companies, state funds and foundations could collaborate on funding a number of projects that expand clean energy activity. A good example of this effort is the Smart Power collaborative project now being undertaken in Connecticut between the Connecticut Clean Energy Fund and various New England foundations. It seeks to expand use of clean energy in the state through public education and other collaboratively funded activities. (www.smartpower.org)



Principal Recommendations: Framework for Moving Forward

Characteristics of Success

Based on our work, six characteristics emerged from interviews and discussions concerning an investment collaboration of states, foundations and other investors. We intend to enlist certain private socially responsible investors who might be worthy partners in this effort. Such collaboration should address the following:

1. Determine whether a collaborative approach involving grants, investments or other options would be of interest.
2. If investment were of interest, offer financial leverage, risk sharing, cost sharing and efficiency in finding, growing and closing investment opportunities.
3. Build any investment on a clear set of up-front objectives and employ a structure that recognizes the different objectives of the participants, acknowledging that flexibility is required and that one size does not fit all.
4. Establish realistic return expectations and underwriting criteria, recognizing that a portion of investments will be “traditional” and a portion “pioneering”.
5. Set aggregate investment goals that can be met by a core group in a reasonable time.
6. Agree on the support services and cost-sharing formula for identifying and grooming clean energy investments.
7. Be prepared to design and implement a market development effort that goes beyond the individual investments made, which could involve significant new grant-making activity by foundations.

Funds and Foundations Meeting

A small group of concerned state funds, foundation representatives, and private investors should meet in the next few months to discuss this report, and decide how to structure an ongoing approach to these issues. This process also should address how to include additional investors.

We intend to enlist certain private socially responsible investors who might be worthy partners in this effort.





In advance of the meeting, it might be helpful to develop some additional information to inform the discussion, such as:

1. A more specific identification of the range of tools, ranging from grants to investments, which could be considered by state funds and foundations.
2. A summary of the investment criteria and statutory constraints that would guide individual decision-making to enter any collaborative agreement.
3. A description of the cost and efficiency benefits resulting from any collaboration and some preferences as to the specific form of collaboration.
4. Market development and enterprise support costs that such an effort would require.
5. An estimate of the size, timing and process required to implement a range of investment collaborations.

We trust this report is the first step toward such a new collaboration among state clean energy funds, foundations, and other interested investors.

Conclusion

We are gratified with the encouragement we received from the foundations and state funds to pursue mutual investment opportunities. We are grateful also to our foundation supporters—Rockefeller Brothers Fund, Surdna Foundation and Oak Foundation.

We hope we have outlined a realistic framework for continued discussions. We believe that we can advance clean energy markets and bring about environmental improvement. But we need new non-profit, state, foundation and investor tools that bring new investment to this important area.

We trust this report is the first step toward such a new collaboration among state clean energy funds, foundations, and other interested investors.





The Authors

Clean Energy Group www.cleanegroup.org

Clean Energy Group (CEG) was established in January 1998 to promote market-based actions to replace the existing electricity generation system with new, less polluting power generation technologies. CEG's mission is to work with all sectors of the economy, including businesses and local citizens, to accelerate the commercialization of clean energy. The organization works to overcome major barriers, including lack of information and technology risk, through carefully structured collaborations, as well as new financing and market development measures.

One such effort is the work of CEG with the states that have established sustainable energy funds to help promote the growth of renewable energy and advanced clean energy technologies. In 1999, CEG began to lay the foundation for a national network of these public sector clean energy investors. This effort produced first the Clean Energy Funds Network (www.cleanenergyfunds.org), and now its successor organization, the Clean Energy States Alliance (www.cleanenergystates.org).

Foundations supporting CEG include The Pew Charitable Trusts, Energy Foundation, The John Merck Fund, Rockefeller Brothers Fund, Oak Foundation and Surdna Foundation. Please e-mail Lewis Milford with any questions at LMilford@cleanegroup.org.

Lewis Milford, a lawyer, is President and founder of Clean Energy Group. Prior to founding CEG, Mr. Milford was Vice President of Conservation Law Foundation, New England's leading environmental organization. He has been an environmental attorney in private practice, a New York Assistant Attorney General representing the State of New York in the Love Canal case, and a law professor and director of the Public Interest Law Clinic at American University in Washington, D.C.

E+Co www.energyhouse.com

Building on earlier experience within the programs of the Rockefeller Foundation, E+Co was established in 1994 as an independent company of entrepreneurs, investors, strategists and mediators focused on one mission: “**Bringing together technology, people and funding to create viable local enterprises that deliver affordable and clean energy to those in need.**” With a presence in Latin America, Africa and Asia, E+Co provides business development services and modest loans or equity investments to fulfill this mission. Our strategy is to demonstrate to public and private sector investors that the establishment of local clean energy enterprises represents a win-win, market-based solution to the twin problems of meeting the unmet demand for energy services and protecting the environment. Ultimately, these new enterprises and access to energy offer opportunities for education, employment, and improved livelihoods—thereby breaking the cycle of poverty. And beginning the future of energy. Please e-mail Christine Eibs-Singer at chris@energyhouse.com for more information.

Philip LaRocco is the co-founder and executive director of E+Co, the leading provider of services and start-up investments in developing country clean energy enterprises. Prior to beginning this work (in 1990) LaRocco spent twenty years with the Port Authority of New York and New Jersey, where he served as the Director of World Trade and Economic Development, responsible for the New York World Trade Center, a network of industrial and waterfront development projects, the region's largest waste to energy facility and a global network of trade development offices and educational programs.



The Reinvestment Fund—Sustainable Development Fund www.trfund.com

The Reinvestment Fund (TRF) is a large regional non-profit development finance institution that uses social investment to build wealth and opportunity for low-wealth communities and low- and moderate-income individuals through the promotion of socially and environmentally responsible development. Operating in five Mid-Atlantic States, TRF has \$170 million under management that supports development portfolios broadly ranging from affordable housing and community services organizations to energy-related projects and small business portfolio companies.

TRF's Energy Group (www.trfund.com/sustainable/index.html) has developed innovative financial tools and technical services to encourage sustainable energy and development practices throughout TRF's mid-Atlantic region.

The Sustainable Development Fund (SDF) was created by the Pennsylvania Public Utility Commission in its final order in the PECO Energy electric utility restructuring proceeding. SDF is managed by TRF's Energy Group and has as its mission the building of a sustainable energy future for Pennsylvania through its financing of renewable and clean energy companies and projects.

SDF received additional funding and responsibilities as a result of the PECO Energy/ Unicom merger settlement. That settlement added funding for new wind development, for solar photovoltaics and for renewable energy education. As a result of these two proceedings, SDF's total funding is approximately \$32 million. Please email Rob Sanders at rob.sanders@trfund.com for more information.

Robert G. Sanders is a seasoned community development professional with more than twenty years of experience in community development and energy-related commercial finance. Rob is Fund Manager of the Sustainable Development Fund, a project of The Reinvestment Fund that provides company and project financing for renewable energy, advanced clean energy and energy conservation technologies. Prior to working with The Reinvestment Fund, Rob held several positions over a fifteen year period in CoreStates Bank's Corporate Community Development department. Prior to working at CoreStates, Rob was Business Development Specialist with the Philadelphia Commercial Development Corporation, Project Director with the National Economic Development and Law Center (Berkeley, California), and Project Director with the Madison Development Corporation (Madison, Wisconsin).



Footnotes

- 1 The May 21, 2002 letter is attached to this report, along with survey questions sent to the foundations.
- 2 Twelve states have created new clean energy funds. For more information on these funds, see the website operated by Clean Energy Group at www.cleanenergystates.org and various articles at the link for "Case Studies and Reports."
- 3 The foundations contacted in the survey include The Bullitt Foundation, the Episcopal Church Foundation, Great Lakes Protection Fund, The John Merck Fund, David and Lucille Packard Foundation, The Charles Stewart Mott Foundation, The William Penn Foundation, The Heinz Endowments, Rockefeller Philanthropy Advisors, The Barr Foundation, The George Gund Foundation, The William and Flora Hewlett Foundation, HKH Foundation, Gordon and Betty Moore Foundation, The Pew Charitable Trusts, The Joyce Foundation, The Rockefeller Brothers Fund, The Turner Foundation, and The Surdna Foundation. Additional foundations and other investors will be sent this report to engage in discussions about collaboration.
- 4 The MRET request for proposal for the new fund (issued on January 24, 2003) can be found at http://www.masstech.org/Grants_and_Awards/GEF/01GEF03Sol.pdf
- 5 TRF's Sustainable Development Fund created the Pennsylvania Advanced Industrial Technology Fund in June, 2002 (http://www.trfund.com/sdf/sdf_paaat.htm). The fund makes capital and managerial equity investments in early stage companies focused in renewable energy and energy efficiency. The fund's general partner is Blue Hill Partners, a private investment firm located in Philadelphia, PA.
- 6 A May 2003 Council of State Government's report indicates how renewable and clean energy could help spur economic development in states that invest in these innovative technologies. Barry Hopkins, Council of State Governments, "Trends Alert: Renewable Energy and State Economies," (May 2003) (www.csg.org under Keyword: *Renewable Energy*).
- 7 Massachusetts Green Energy Fund, *Fund Overview* (Jan. 24, 2003).
- 8 Altman, "Small Picture Approach to a Big Problem: Poverty," *New York Times*, August 20, 2002, B2.
- 9 These views are derived from another CEG report on the clean energy funds, "A Note from the Authors..." *Case Studies of State Support for Renewable Energy*, September 2002. (www.cleanenergyfunds.org)
- 10 These conclusions are based on several private interviews with leading investors. We also want to thank Ken Locklin of Energy Investors Fund Group for his assistance on this section of the report.
- 11 According to a June 2003 multi-client study by Navigant Consulting, the worldwide renewable energy equipment business is projected to grow from \$17 billion/year in 2002 to an estimated \$35 billion/year by 2013. Lisa Frantzis, "The Changing Face of Renewable Energy," Navigant Consulting (June 18, 2003) (50 page public study) (www.navigantconsulting.com)
- 12 More favorable federal tax treatment for clean distributed generation also could boost the industry. Separate energy bills passed in the US House and Senate as of May 2003 contain significant new investment tax credits for solar, fuel cells and other technologies. If enacted, these could create new finance vehicles that could lead to greater investment in clean energy.
- 13 See: www.thecarbontrust.co.uk/foundation
- 14 Interviews with professional investors yield two other important themes. First, from an investor's perspective most clean energy and distributed generation technologies are too immature to constitute a stand-alone market. High cost, technical constraints, fundamental knowledge barriers (few trained building inspectors and appropriate building codes, no interconnection standards or industry-specific professional engineers/architects) create a market that is too undeveloped for specialized commercial energy investors and still requires additional research, development and demonstration. Second, these investors believe that the regulatory quagmire is under-rated by all except experts and this constitutes a significant barrier to new market entrants. Hundreds of local standards and codes must compete with state regulations and find a path to national standards.
- 15 As indicated below at the section of the report titled "Foundation Options for Collaboration," we mean to refer to foundation "investments" quite expansively. This could refer to a broad range of options from program related investments, to portfolio investments to grants and other conventional philanthropic tools.
- 16 For many foundations, the decline in their endowment due to recent stock market reverses was the sole reason for lack of interest. If that situation changes, their interest presumably would increase over time. For others, they have not done any program related or other portfolio investment, so this entire area would be a novel exercise.
- 17 Foundations are heavily involved in providing grants to leverage or create state, city or local "housing trust funds" that in turn develop housing projects for the poor. A series of articles in the April 17, 2003 edition of *The Chronicle of Philanthropy* titled "The Housing Squeeze: Nonprofit Groups and Foundations Try New Ways to Help Those Who Can't Afford a Home" details many creative new ways that foundations have become philanthropic investors in the housing market. The fact that grants are used to fund actual projects is nothing new in the low-income housing field. It would be a new approach, but the justifications for intervention in the housing market—lack of sufficient private market action, public and societal benefits, and ability to effect change—also apply to the clean energy area.



Such philanthropic investing is not limited to housing. Some foundations are seeding investment funds in the life sciences area, to create a nonprofit “proof of concept” fund that would pay for critical life sciences experiments, market studies or even business plans to help scientists determine the commercial potential of their medical research. (Melcer, “Funds Pledge to Give Millions to St. Louis Life Sciences Research,” *St. Louis Post Dispatch*, April 13, 2002).

- 18 Another fascinating example of a new innovative approach taken by foundations is the recent work of the Bill and Melinda Gates Foundation to support new drug development for underserved global populations. Because the private sector is not devoting needed resources to drug development and delivery, the foundation is directly funding drug research, development and delivery because of the enormous public benefits of accelerated action in this market. Whether this foundation entrepreneurial model will be relevant to other areas where the private sector is not delivering sufficient public benefits (like clean energy) is important to consider. (Gates Foundation makes \$60 million grant to accelerate HIV/AIDS microbicide research/ Research Grant will allow venture capital approach to microbicide development. See www.gatesfoundation.org)
- 19 We again emphasize that creation of such a new entity is only one option. More informal approaches are certainly possible. Each approach has its advantages and disadvantages, which should be explored in future discussions.
- 20 It is helpful to put a finer point on this distinction between single and pooled investments, and how different vehicles might or might not satisfy foundation concerns. A state fund interested in investment only in its own state could offer co-investment to local foundations with a likely focus on projects and companies located in that one state. A state fund interested in a broader pool of investment could focus on projects and companies in several states or a broader region, with other state funds and foundations from a broader geographic area as possible co-investors. For foundations interested in a more diverse risk profile, a larger impact on the clean energy market and concern for political influence with a single state model, the single state option might not be sufficiently attractive. For foundations willing to take more portfolio risk, with a lesser interest in the scale of the environmental impact and an acceptance of the sole state political issue, a single state focus for co-investment might be acceptable.
- 21 We propose a new vehicle or intermediary only as a strawman suggestion for how to achieve success. It could be that such an intermediary simply serves as a facilitator of investment between funds and foundations, or it could serve a more formal role. Other options are possible, and should be the subject of future discussions.
- 22 In a June 2003 report, the U.S. National Renewable Energy Laboratory (NREL) focuses on a related financing issue—the gap between the public funding of clean energy research and development and need of the private capital markets for commercial products and companies. That’s the well-known valley of death for new companies to traverse. However, as good as it is in identifying the problem, the report fails to note a possible solution—the new role of state clean energy funds and other potential foundation and private investment partners that could begin to fill the investment gap. Murphy and Edwards, “Bridging the Valley of Death: Transitioning from Public to Private Sector Financing,” NREL (June 2003) <http://www.nrel.gov/docs/gen/fy03/34036.pdf>
- 23 The lack of sufficient “deal flow” is a problem for many existing state funds.
- 24 These are companies that introduce a new product, market or technology within an existing product or established market.
- 25 CESA will build upon the experience of the Clean Energy Funds Network (CEFEN), an informal multi-state network for collaborative activities between state funds from 1998-2002 that is managed by the Clean Energy Group. The CEFEN website is www.cleanenergyfunds.org. The informal work of CEFEN has now been assumed by a new nonprofit organization, Clean Energy States Alliance (CESA). CESA is a new tax-exempt organization recently approved by the Internal Revenue Service. CESA will be engaged in a range of new joint activities on behalf of the state funds. It could serve as a focal point of activity between the funds and foundations interested in this approach. See the CESA website at www.cleanenergystates.org.
- 26 CEG (www.cleanenergygroup.org) is a nonprofit organization that works to accelerate commercialization of clean energy technologies through advocacy, education and partnerships. Funds that have collaborated on joint activities with CEG (and now CESA) include California Energy Commission; Connecticut Clean Energy Fund; Energy Trust of Oregon; Illinois Clean Energy Community Foundation; Long Island Power Authority—Clean Energy Initiative; Massachusetts Renewable Energy Trust; Metropolitan Edison Company Pennsylvania Electric Company Sustainable Energy Fund; Metropolitan Edison Company Sustainable Energy Fund of The Berks County Community Foundation; New Jersey Clean Energy Program; New York State Energy Research & Development Authority; Ohio Energy Loan Fund; Rhode Island Renewable Energy Fund; Sustainable Development Fund—The Reinvestment Fund (Pennsylvania); Sustainable Energy Fund of Central Eastern Pennsylvania; West Penn Power Sustainable Energy Fund; Wisconsin Focus On Energy; and Xcel Energy Renewable Development Fund (Minnesota).
- 27 As stated above, several states have expressed support for creation of a new organization of state clean energy funds. CESA, a new non-profit, could serve some of these institutional needs. It is up to foundations to determine whether this central organization also could assist them on these issues.
- 28 See Merckl and Marckwald, “From Donor to Investor: Applying a Venture Capital Model to Foundations,” at www.cciforum.org (Conservation Finance tab). http://www.cciforum.org/pdfs/VC_Foundation_Models.pdf.
- 29 See: <http://www.ecoenterprisesfund.com/>
- 30 See: www.chrysalix.com
- 31 Again, these examples show how investments might be used by foundations. Grant making to support related activities in these areas could also be extremely productive.
- 32 The assumption here is that a mix of company, project and other investment in a broad portfolio is important to success in these early markets.



Appendix

What follows in this Appendix are copies of the original materials that began this project and that were used to conduct the 2002 survey of state fund and foundations referred to in this report. The Appendix consists of three documents.

First, there is the May 21, 2002 letter from the three foundations that requested the participation of other foundation officials and state funds officials in this survey.

Second, there is a document that summarized the basis for the Clean Energy Initiative in greater detail.

Third, there is the “Suggested Topics and Questions” document that was used as the survey questionnaire for telephone interviews with foundation and other officials.

They are reprinted here to refresh the recollection of those who participated in our initial survey, and to inform others about how we developed the data that informs this report.





ROCKEFELLER BROTHERS FUND



May 21, 2002

Re: Clean Energy Initiative

Dear _____ :

Recently, the Rockefeller Brothers Fund, Surdna Foundation, and Oak Foundation funded a new initiative to explore opportunities to create a more robust market infrastructure for clean energy in the United States. As part of the Clean Energy Initiative, we are trying to identify innovative ways for foundations to help accelerate clean energy market development. We are writing to ask for your participation in this process through an interview.

Our foundations have provided funding to the Clean Energy Group, E+Co, and the Reinvestment Fund of Pennsylvania to undertake the Clean Energy Initiative. Additional information about the Initiative and the research it is conducting is attached. At this stage, we are interested primarily in information about your foundation, your potential interest in the energy issues investigated, and your clean energy grant and investment activities, if any. (For the purposes of this letter, “investment” activities could include, but are not limited to, program related investments [PRIs] and portfolio investments).

A summary report of the investigation will be distributed following the interviews. If the Initiative’s initial research is productive, we might ask you to join us in a meeting to discuss the direction of the project at a later date. However, the initial purpose of this letter is to share information about the Initiative with you, and to encourage you to respond to a follow-up call from Lewis Milford of



the Clean Energy Group and Rob Sanders of the Reinvestment Fund of Pennsylvania. We strongly believe this project is critically important to all our environmental goals.

We appreciate your consideration and are grateful for any assistance you can provide.

Sincerely yours,

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Enclosures
cc: Lewis Milford,
Clean Energy Group
Rob Sanders,
The Reinvestment Fund



Clean Energy Initiative

Background of the Clean Energy Initiative

The Rockefeller Brothers Fund, Surdna Foundation, and Oak Foundation have provided funding to support a joint project of the Clean Energy Group (CEG), E+Co, and The Reinvestment Fund of Pennsylvania. This project will investigate how to accelerate the commercialization and distribution of clean energy in the U.S. The *Clean Energy Initiative* will explore the reasons why clean energy markets are not developing quickly, and will attempt to help create new opportunities to accelerate development. As one of its objectives, the *Clean Energy Initiative* seeks to understand what roles foundations, non-profits, and financing entities can play in advancing these efforts.

While we are approaching our investigations with an open mind, we have some strong assumptions about how to accelerate market activity if clean energy technologies are ever to gain a strong foothold. We are at a critical stage in clean energy market development; newly restructured markets are in flux. Although they have not delivered all their promised benefits, we believe the new rules present opportunities that can open the door to greater commercialization and distribution of clean energy.

One reason we have hope for change is the new direction taken by many states. States are now making significant investments in clean energy through public funds dedicated to clean energy projects and market development. Through the important efforts of Clean Energy Group's Clean Energy Funds Network (CEFN), states with clean energy investment funds are now looking for new partners for creative investment options. These state funds will generate over \$3 billion in clean energy funding over the next decade.

Non-profit institutions and financial intermediaries are looking for ways to work with these state funds. Foundations also could play a significant role as partners in these funds. (For more information on these funds, we are enclosing a recent article on the state funds co-authored by one of our grantees, Milford et al, "States Emerge as Clean Energy Investors," *Electricity Journal*, November 2001) (http://www.cleanenergystates.org/CaseStudies/bolWiserSbcEj_2001.pdf). Just as states are now embarking on new clean energy strategies, we believe foundations have new opportunities to explore emerging tools that can help them bring about change in clean energy markets. The options might include traditional grants as well as investments and related options. We know that our activities to date have not been sufficient. We know we

need to do more to leverage private investment in the building of domestic clean energy markets.

Tentative Models

As we proceed with our investigations, we are exploring a number of models for intervention in the markets that warrant a closer look. We invite your reaction to these proposed models, and are interested in any suggestions about other approaches that we may not have considered.

1. Providing capital to Clean Energy Funds to finance clean distributed generation.

There are twelve state clean energy funds (CEF's) that are working together with support and coordination provided by CEFN. The Connecticut Clean Energy Fund has begun working with CEFN to design a bulk-purchasing program for fuel cells that would aggregate purchases throughout the eastern United States, as well as possibly provide technical services and access to affordable lease financing. Similarly, Pennsylvania's Sustainable Development Fund is seeking capital to expand its wind power finance program. We wonder if there may be a role for foundations to play as potential investment partners with state funds.



2. Creating a new domestic investment financing facility targeting renewable energy projects.

Combining elements of the Renewable Energy and Efficiency Fund (REEF) that finances projects in developing countries,¹ and E+Co, a new domestic fund could provide capital as well as technical and management services to U.S. clean energy ventures and projects. In developing country markets, it has been demonstrated that the combination of development services and seed capital, followed by investment, is a successful formula for stimulating clean energy project development. One of the major barriers to greater use of technologies such as solar and fuel cells appears to be the limited number of companies involved in financing and installing these technologies; such financing could help expand the number of such companies involved in this work. While it is not clear that such a new fund is needed, this may be an area in which foundations could be usefully involved.

3. Harnessing the experience of regional Community Development Financial Institutions to help build clean energy markets.

Community development financial institutions (CDFI's) have played a critical role in accelerating the growth of new markets to accomplish their

social mission. They have combined subsidies (i.e., lower cost of funds and operating support that underwrites additional transaction costs) with the market discipline of successful lending to, and investing in, a broad range of portfolio companies and projects. One such CDFI, The Reinvestment Fund of Pennsylvania, is operating a clean energy fund in Pennsylvania. Having already established a strong track record of managing foundation PRI's, we wonder what role CDFI's might play in building clean energy markets, and what role foundations might play in working with CDFIs in this new area.

4. Creating a new venture incubator organization to accelerate the commercialization of clean energy technologies and products.

A new clean energy venture "incubator" could contract for R&D services, and provide staged venture and project funding in conjunction with expert technical and management guidance.

While there are some related efforts in place, such as the National Renewable Energy Laboratory's venture incubator, and other non-profit, clean energy venture fair activities, there may be a need to expand such activities significantly. We believe it might be possible for foundations to play a role in these activities.

5. Creating a new distributed generation, public or nonprofit, facility to aggregate latent customer demand for fuel cell, PV and other clean technologies.

A new clean energy entity, perhaps a nonprofit or a public institution, could aggregate customer demand for these technologies. Right now, it may be that funding for such intermediaries, with the ability to pull customer demand through aggressive aggregations, a major missing link in these immature markets, could be an interesting investment prospect for foundations.

Next Steps: Questions We Seek To Answer

Our foundations have asked Lewis Milford of the Clean Energy Group and Rob Sanders of The Reinvestment Fund of Pennsylvania to explore the following questions with you on our behalf. We hope these questions will help us determine the best way for foundations to accelerate clean energy market development.

- Do you believe foundations could play new roles in accelerating the implementation of clean distributed electricity generation? If so, in which areas would you like to see greater foundation involvement? In which areas do you think foundation involvement would be less meaningful?

1. See <http://www.ifc.org/enviro/EPU/Renewable/REEF/reef.htm>. The REEF was established by the International Finance Corporation, the private arm of the World Bank. The fund is designed to increase use of renewable technologies in the developing world through, among other things, a combination of extending debt and equity to companies, and assisting them with market development support. It is funded by a combination of multi- and bi-lateral funds and private sector investment.



- What non-profit institutions and financial intermediaries have actively invested in the development of clean energy markets? Have you worked with any of these players?
 - Do you believe there is a meaningful role to be played by foundations during this transition period from subsidized commercial wind power development to unsubsidized project development?
 - Do you think there is an opportunity for foundations to make grants or investments in existing or new non-profit financial intermediaries to finance clean distributed generation and sustainable energy projects over multi-state regions?
 - Has your foundation made investments in clean energy development or in other environmentally or socially responsible market mechanisms? If so, what have you learned from such investments? What has worked and what has not?
 - Are you considering investing in clean energy? If so, what information is needed to explore that opportunity more actively? If not, why not, and are there ways to encourage such interest?
- We hope you share our interest in exploring these market-building approaches. Building sustainable energy markets in the U.S. through foundation grants or investments are strategies that have direct ramifications for a broad range of issues ranging from climate change to sustainable growth to matters of social equity. We are excited about the potential for this effort and hope you will help us.
- Lew Milford and Rob Sanders will contact you to discuss your participation and to schedule an interview within the next few weeks. At the same time, they will be gathering similar information from the private sector. Lew and Rob will synthesize

what they learn in a written report that will be shared with all project participants. If there is sufficient interest following distribution of the report, we will hold a meeting to discuss the report's findings and recommendations. The purpose of such a meeting would be to identify the best ideas and to discuss how to move them forward together. Subsequently, if we make progress at the meeting, we will have other conversations designed to move this initiative to a more substantive level with as many foundations as are interested in working with us.

If you have any questions, please feel free to contact Lew or Rob directly. Lew can be reached at (802) 223-2554 or email: Lmilford@cleaneenergygroup.org; Rob can be reached at (215) 925-1130 or email rob.sanders@trfund.com.

Thank you.



Suggested Topics and Questions

Introduction

A. We will give you more background about this effort

- 1) Do you have any interest in the approach proposed in the letter?
- 2) Do you have any reactions or suggestions about the scope and direction of this initiative?

Questions

A. Does your foundation make program related investments? If not presently, would it consider such investments?

B. Do you make any other portfolio investments in socially responsible activities?

- 1) If so, what is the extent of your involvement and what have you learned from such investments?
- 2) Have you achieved your goals for these investments and, if not, why not?
- 3) What should we know about these activities that might be helpful to this initiative?

C. What is the decision-making process for portfolio investments at your foundation?

D. Has your foundation made investments in clean energy development?

- 1) If not, why not, and what information might you need to consider such investments?
- 2) If so, what has been your experience with these investments?

E. Do you believe foundations could play new roles in accelerating the implementation of clean distributed electricity generation through investments?

- 1) If so, in which areas would you like to see greater foundation involvement?
- 2) In which areas do you think foundation involvement would be less meaningful?

F. Do you think there is an opportunity for foundations to make investments in existing or new non-profit financial intermediaries to finance clean distributed generation and sustainable energy projects over multi-state regions?

G. Would you be interested in engaging in a multi-foundation process to explore investment opportunities in clean energy, as this initiative proposes? If so, what role would you like to play?

H. Do you have any other suggestions for us in connection with this work?

Clean Energy Initiative

*A Report on How Foundations, State Funds, and Social Investors
Could Pursue Joint Investments*



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