

The Climate Prosperity Handbook

Executive Summary



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[Why Climate Prosperity?]

As we hurdle ever closer towards the collective effects of our use of energy, land and resources; localities are taking the lead in cultivating cutting edge solutions to confront the challenges of climate change while simultaneously looking to bolster their economies. No longer are local level leaders waiting for the international or even national- level to respond. They now recognize that the challenges of climate change must be met in their own backyards, led, not necessarily by world-stage leaders but by local stakeholders. It is now widely agreed upon that action must take place on the local level, and cities and regions are proving to be the living laboratories for incubating the preeminent solutions to addressing climate change.

This handbook demonstrates the utility of adopting the three-part agenda of the Climate Prosperity Project **Green Savings/ Green Opportunities/ Green Talent**. The unequivocal message is that rather than climate action being costly and harmful to the economy, it creates wide ranging savings and benefits by: spending less on energy through increased conservation and efficiency; generating significant new employment and entrepreneurial opportunities; expanding renewable energy production and distribution, and offering a wide range of new products, production processes, goods and services, and new technologies.

The purpose of this handbook is to reveal the potential of sustainable economic development and provide a map that communities can use to implement these efforts. The handbook:

- Outlines why greening the economy has taken center stage on political and economic agendas.
- Presents the climate prosperity model **Green Savings/ Green Opportunities/ Green Talent**; along with a review of data and literature that help to paint a detailed the picture of the model
- Outlines how the U.S. Federal framework is taking shape to support sustainable economic development; and
- Demonstrates, through the Getting Started Guide and Compendium of Green Strategies, how communities can move climate prosperity planning forward in their own backyards

[Why Now?]

The global acceptance of climate change has arguably been the clinching factor pushing sustainable economic development onto the world agenda, and this need to green the economy has also been fueled by political, economic, social and security concerns.

Changing energy marketplace

In 2006, the U.S. imported about 60 percent of its crude oil demand¹. Dependence on one energy source makes the entire U.S. economy highly vulnerable to any disruption in supply from natural, economic or political causes. According to the U.S. Department of Energy (DOE), “Developing domestic energy sources with known and stable costs would significantly improve U.S. energy stability and security.”²

Volatile energy prices are changing the location and competitiveness factors of businesses, and thus of communities. For some, we are seeing businesses return to the U.S. to be closer to consumer markets and or resources that serve as inputs to product development. Other corporations are relocating overseas for the same reason.

Economic development recrafted

There is a series of factors that cumulatively are recrafting the economic development environment and the conditions that make communities competitive. These are:

- *The changing business landscape:* Globally competitive businesses remain so by staying ahead of the rest of the world's learning curve. Today, that means incorporating energy and environmental concerns into their business practices.
- *The trajectory of technology and innovation:* Businesses are responding to a demand on the part of business, government and consumers for cleaner, more energy efficient products and services.
- *Changing stakeholder demands:* Demand for environmentally friendlier products is on the rise from businesses, consumers and government.
- *Dynamic policy drivers:* Some cities, states, regions and countries have been engaged in innovative policy formation to encourage the movement of firms, consumers and markets to incorporate greener practices.

[The Dynamic Benefits of Climate Prosperity]

Green Savings

To reduce carbon emissions and move toward a more sustainable economy, the low-hanging fruit is greater energy efficiency, conservation and using less carbon-intensive energy sources in existing products.³ Green savings can be threaded throughout business practices to enhance competitiveness; consumer savings to act as a net wage increase; and community savings to act as an economic stimulus. More efficient policies on the part of government and businesses will lead consumers to lower energy costs, which will provide more disposable income enabling them to invest in or purchase other things.

- *Business savings:* Private companies are now taking a leadership role in energy conservation in three ways: 1) increasing energy productivity internal to the firm; 2) adjusting products and services to reflect customer expectations; and 3) building sustainability into their business models and competitive advantage.⁴
- *Consumer savings:* Consumer savings can come in a variety of ways; greening homes, changing commute patterns, and encouraging recycling among others. Recognizing the economic and environmental value of consumer conservation, states and cities have started to provide incentives to people to encourage greater energy efficiency.
- *Community savings:* To better manage their tightening budgets and spiraling energy costs, states and cities are also implementing their own efforts to conserve energy. These actions are not only having a positive impact on public bottom lines, but also serve as a model and incentive to the private sector to increase their activities in these directions as well.

Green Opportunities

The opportunities available from greening the economy are vast. In the past few years, we have seen alternative energy move from being a niche market to become a mainstream investment target. Further, some of the best known 20th century entrepreneurs, many who drove the IT revolution, are leading the renewable energy investment charge. As demand for low-carbon solutions grows, this will lead to the emergence of new value chains that disrupt existing industries and create new ones, such as industries based on large scale use of biomass to fuel power plants.⁵ As a result, we are witnessing investment opportunities increasing globally, the creation of new businesses, and the emergence of entrepreneurial leaders in these industries, including but not limited to:

- *Green buildings:* Driving the growth of green buildings is a growing environmental awareness; increased attention towards the bottom-line of building costs (energy savings); increasing costs of non-renewable resources, a mushrooming of local incentives implemented to spur the growth of the green building industry, and an increasing awareness by businesses that greener workplaces attract talent.
- *Recycling:* The recycling industry holds vast potential that has just begun to be tapped. The National Recycling Economic Information study commissioned by the EPA showed that there are over 56,000 recycling and reuse businesses in the United States, producing a total annual payroll of about \$37 billion.⁶
- *Water:* Addressing water quality issues is critical if sustainability initiatives are to be successfully wed with economic development. As with other forms of infrastructure, investing in water acts as a basic economic stimulus, strengthening local and regional economies both in the short and long run. According to an evaluation by the American Society of Civil Engineers, the US will need to spend over \$1 trillion to repair its infrastructure, and it gave the worst infrastructure evaluation to the water sector.
- *Transportation:* According to the Northeast Sustainable Energy Association, transportation uses two-thirds of all the oil in the US, and accounts for 60-90 percent of the urban air pollution.⁷ Opportunities to innovate and grow in the area of transportation are three fold: change economic incentives to encourage the utilization of more efficient forms of transportation; encourage the development of more efficient transportation vehicles and systems and the subsequent infrastructure to support it; and utilize alternative fuels to power various modes of transportation.
- *Manufacturing:* Many communities are uncertain as to their potential place in the low carbon, green, economy. As sustainability efforts become more wide spread, opportunities are expected to exponentially filter through to every level of the economy, thus making prospects within a multitude of different industries and supply chains increasingly available to various communities. From software engineers to finance specialists to construction workers – the low-carbon economy will penetrate every aspect of the economy – beyond high level innovations, direct to the local level. Everything will need to adapt, from infrastructure to how we lay our electricity.
- *Green Supply Chains:* While large manufacturers and original equipment manufacturers (OEMs) have been increasingly able to transition into green products, small and medium-sized enterprises (SMEs) lack the time and resources to easily transition. The economic restructuring that is stemming from sustainability demands a level of upfront investment as well as business acumen and marketing expertise that many good SME's simply do not have and cannot afford individually. As such, economic development intermediaries will need to play a critical role in helping SMEs to leverage not only their own manufacturing strength, but the strength and support of a regional cluster or supply chain network, and the resources of traditional economic development and workforce development partners.

- *Smart Grid Infrastructure: a key component to the low-carbon economy:* Further, one of the paramount elements to successfully transitioning to a greener economy lies in our ability to supply, manage, and consume more efficiently. The infrastructure that serves the power supply of the U.S. lies at an impasse. As demand for energy continues to rise, the North American grid is being stretched to its limit. As U.S. infrastructure continues to become outdated and under capacity, smart grids are seen as a technological solution that could take some of the strain off of the current grid and aid it in functioning more effectively and efficiently.

Green Talent

The literature is clear that investment in activities that combat climate change can be a job creation mechanism. Those benefits play out in several ways: the creation of new jobs in energy and related industries, the retention and strengthening of skills in traditional industries that have been reinvigorated by becoming more sustainable, and a tendency for those jobs to be quality jobs meaning they tend to be higher paying and more secure (less vulnerable to outsourcing).

- *Quality job creation:* The job creation potential from renewable energy and energy efficiency is centered around the significant potential for market growth in the U.S. To illustrate, the U.S. is not a leader in wind energy generation but it now represents one of the largest potential single markets. With the mushrooming of state renewable portfolio strategies, the weakness of the dollar and rising energy costs, we have seen a proliferation of foreign investment in the U.S. to produce wind energy⁸, supported by the production tax credit.⁹
- *Quality Skills: Opportunities to build and strengthen indigenous skill base:* Renewable energy and energy efficiency industries will create high-paying jobs within the fields of science, manufacturing, and skilled labor.¹⁰ There are roughly five million employees working for environmental companies, and they include workers of all skill levels including highly skilled technical and professional occupations.¹¹ The renewable energy and energy efficiency economies also hold tremendous opportunities for job training, especially for low-income and disadvantaged workers. Oakland, California has created a Green Academy Workforce to train low-income individuals to clean and renovate their own neighborhoods.
- *Quality of life/place: attract and retain talent:* Increasingly companies believe that greening the workplace and the community is essential to attracting a talented workforce. In their classic text on local economic development, Edward Blakely and Ted Bradshaw state that businesses look to quality of life and livability as key location driving factors that local governments should build upon and promote to the business community.¹² As quality of life has become an essential business location factor, smart growth and green buildings are part of a critical mass of tools required to integrate sustainability initiatives with economic development.

[Federal Framework]

The results of the 2008 Presidential and Congressional elections ushered in a new era of federal support for a national climate prosperity strategy which provides a significant opportunity for local communities to advance a green economy agenda.

There have been numerous growing and driving forces that are promoting a climate prosperity strategy within the federal government:

- The “scientific debate” over climate change has been settled
- International political pressure and economic competition is forcing a national U.S. response.
- Leading corporations have endorsed the approach of “cap and trade” to reducing emissions

Obama Administration policy

During his Presidential campaign, Barack Obama was a clear proponent of action to address climate change: “Climate change is real. It is something we have to deal with now, not 10 years from now, not 20 years from now.” The President's continuing commitment was further demonstrated in his FY10 Budget Document, "A New Era of Responsibility – Renewing America's Promise," which stated as goals:

- Develop Economy-Wide Emission Reduction Program
 - 14% Below 2005 greenhouse gas level by 2020
 - 83% Below 2005 greenhouse gas level by 2050
- Implement Cap and Trade System
 - 100% Auction
 - Invest \$150 Billion over 10 years, starting FY12
 - Balance of funds returned to the people, especially vulnerable families, communities, and businesses to help in transition

Upon taking office, President Obama implemented the American Recovery and Reinvestment Act of 2009, which strongly supports energy conservation and efficiency investments. Further, based on the historic shift in congressional leadership, he has moved forward with his commitment to support a national cap and trade system for carbon.

[Getting Started Guide]

Climate prosperity strategies provide cities and regions the opportunity to increase local economic growth, employment creation and development initiatives within the context of sustainable development. Cities such as Chicago and San Jose have climate action strategies on the books, and several cities, both large and small have already forged ahead with climate action strategies. Eight pilot projects are currently taking place across the country under the umbrella of the Climate Prosperity Project and will serve as vital laboratories for better understanding how to best go about doing climate action strategies on the city, regional and state levels. Silicon Valley's strategy, “Climate Prosperity: A Greenprint for Silicon Valley,” is an excellent resource for other communities to draw on.

The getting started guide is intended to provide economic development professionals, community leaders, planners, organizers and advocates with strategies that communities can use to start engaging in climate prosperity strategies. The Getting Started Guide includes: building the foundation; scenario planning: a visioning tool for climate prosperity strategies; and translating visions into strategies.

Steps to building the foundation:

- Identify a Champion
- Identify the Lead Organization
- Assess Your Community
- Mind Shift to Sustainability Planning
- Build Upon What You Have
- Establish Lead Organization as Climate Prosperity Hub for Community
- Identify Diverse and Dynamic Stakeholders
- Educate Stakeholders and Leaders
- Dedicate Staff to the Process
- Build a Dedicated and Focused Task Force
- Seek Diverse Financing Streams for the Process and Plan
- Develop a Strong and Unifying Vision

Scenario planning: a visioning tool for climate prosperity strategies:

While most economic development professionals are fluent in the art of strategic planning, scenario planning represents an offshoot that can help leaders think through highly complex and dynamic situations. In strategic planning, a community looks at its current situation and compares it to what it would like to be in a certain amount of time.¹³ Scenario planning takes this one step further by offering a dynamic systems approach to identifying multiple futures based on internal and external, known and unknown social, technological, environmental, economic, and political forces. As such, scenario planning is presented in detail as one approach that communities can take to start moving forward their climate prosperity plans and strategies.

Translating visions into strategies:

- Develop goals and objectives
- Develop an action plan
- Measure and track success
- Build momentum through marketing the message

As an additional resource, the compendium of cases that follows this document provides a range of independent strategies that could serve as components of a wider strategy.

[Conclusion]

The economic development implications of this movement have only recently become apparent to the economic development community. The true cost of energy, i.e., the environmental and economic consequences of green house gas emissions, regulated at the national level, will now be a major cost of production, altering the competitive position of industrial sectors and regions. The new federal investments in energy conservation and efficiency will provide opportunities for communities to position themselves in this new energy economy.

Because of the ubiquitous nature of energy usage, participation in the new energy economy will be open to a broader range of communities. Unlike the biotech sector, in which only a few regions were favored by sustained federal R&D funding, concentrations of venture capital firms, or the legacy locations of pharmaceutical companies, all communities can benefit from Green Savings, and large numbers from Green Opportunities (e.g., weatherization companies) and Green Talent (e.g., the greening of existing manufacturing jobs).

Utilizing climate protection strategies to drive economic development, and focusing economic development programs on sustainability, will require economic development practitioners to become knowledgeable about the new science of climate change, and to more aggressively engage with the federal agencies and Congress.

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