

# CLUSTERS OF OPPORTUNITY & THE GREEN ECONOMY

## The Green Valley Initiative

With energy costs soaring and the need to reduce greenhouse gas emissions urgent, everyday routines of individuals and business practices are beginning to change. Stimulated by interest in reducing energy bills as well as by incentives and standards implemented by public policymakers, these changes in behaviors and business practices are creating new market demands and therefore new business opportunities.

Not only is change imperative for achieving the targets set for reducing greenhouse gas emissions in California, but Californians have already demonstrated that reducing energy consumption through energy efficiency (and generation from renewable sources) is possible and can bring about positive economic gains.

The economic gains are economy-wide; however, growth in specific industries and business activities also translates into growth in business and job opportunities. The Inland Empire is poised to benefit from these developments by applying clean technologies to its existing industries.

### The Business Case for Green Innovation: Californians have demonstrated Progress is Possible

Through energy efficiency programs and standards, the California has reaped real cost savings. This savings is essentially economic resources that can be redirected from energy costs to capital investment and job creation.

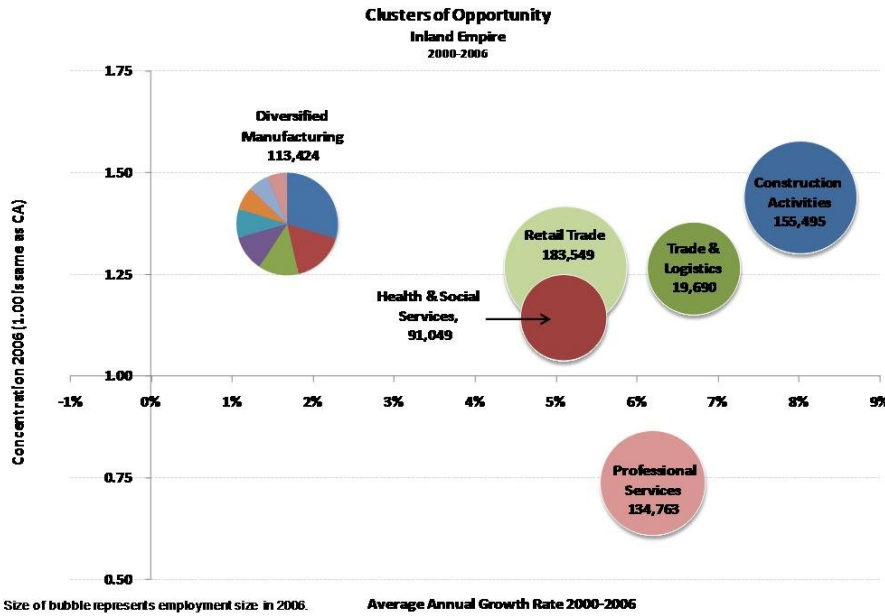
In 2003, CA saved 15% of total annual energy use through utility efficiency programs and building & appliance standards resulting in a cumulative dollar saving for residents of \$56 billion from 1975 to 2003 and an estimated savings of another \$23 billion by 2013. Since 1975, this energy savings has supplanted the need for 24 new, large-scale power plants.

Compared to other states, California spends less on electricity. In fact, expressed as a fraction of GDP, California spends half as much on electricity as Texas -- a difference of \$25 billion each year that Californians can spend on other things. Unlike the US, California is more energy efficient now than in 1970.

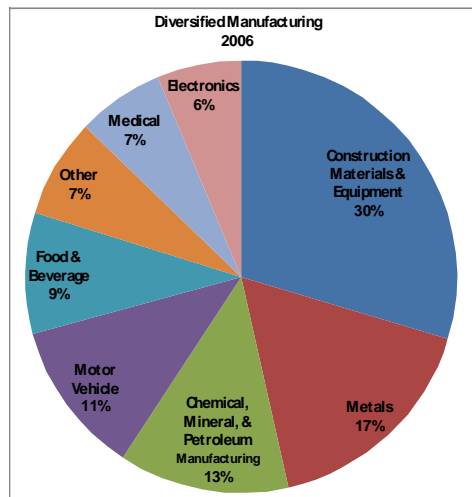
### California's Green Economy: New Opportunities for the Inland Empire

The realm of business activity of product and service providers situated between the producers and end users holds the greatest potential for business growth and job growth at a local level. As green products and practices permeate the reaches of the economy, the discussion is no longer about the emergence of a new industry; instead it is about the transformation of the entire economy. This transformation

is toward an economy that makes more efficient and sustainable use of our limited natural resources.



In terms of the Inland Empire's economic strengths, the region is well-positioned to benefit from the continued development of the green economy. Since 2000, the Inland Empire has witnessed growth in numerous segments of the economy. Although not highly concentrated compared to the rest of the state, the diverse segment of Professional

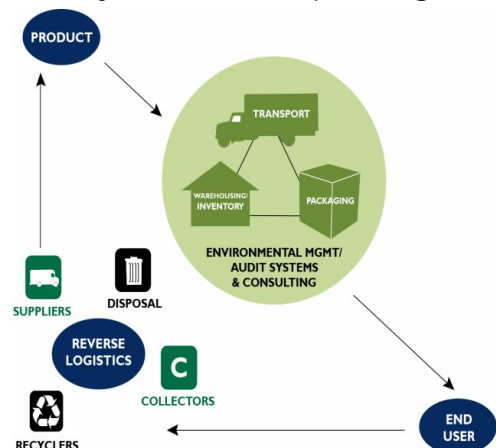


Services is growing strongly providing essential services to the rest of the economy. The region's manufacturing activities are diverse, exhibiting a range of capacity as well as ties to other growing industries. Some areas of growth such as Construction, Health and Retail, are primarily population driven while others such as Trade & Logistics, are not.

Although economic development efforts are often focused on the export-potential of a region's industries, emerging business and job growth opportunities related to the green economy are in the local application of green products and practices to the broad array of end users spanning residents, businesses, industry and the public sector.

### Green Logistics

The Inland Empire plays an important role in the nation's trade and logistics system and therefore is well-poised to establish the region as a green logistics hub. Along the way between the point (or multiple points) of production and the end user, much transpires involving transportation, packaging,



warehousing and inventory. In all of these areas there are opportunities for improving resource efficiencies through the application of new technologies and the provision of services. In addition, resource efficiency includes reverse logistics, which creates new business opportunities in the collecting, recycling, and safe disposing of refuse as well as in the supplying of producers with repurposed materials.

## Green Building

Opportunities in green building go beyond construction. First of all, the methods and materials associated with green building are relevant in all types of construction: residential, commercial, industrial, public sector, and infrastructure. Green building begins with land-use planning with considerations of density, relative proximity of housing to jobs, and integration of transit options. As demand grows for energy and resource efficiency in our structures, opportunities grow for developing and applying new materials and methods in the design. For example, green design integrates energy generation and conservation as well as water recycling components in the design of a structure. Considerable opportunity exists in the expanding realm of building materials. Examples include building elements with integrated photovoltaic solar cells, building materials produced through environmentally sustainable processes and from recycled materials, highly durable materials as well as highly insulating building materials.

Green building includes the greening of the construction process and presents opportunities for managing site water run-off and the utilization of low-emissions equipment. The realm of maintenance and operations holds huge potential for the provision of new products and services in the areas of energy management, energy efficient equipment, appliances and lighting as well as cleaning and recycling. In particular, the wide-spread application of energy management systems and smart technology will result in both, considerable cost-savings in building operations costs and considerable business opportunities for the provision of energy efficiency products and services. Demolition is a part of the green building lifecycle and presents new opportunities in materials recycling and repurposing. In addition, this segment has potential for adding value in other areas such as materials, design and planning.

Financing plays an important role in green building as innovative products emerge that support the expansion of these activities such as public incentives and mortgage discounts for energy and resource efficient buildings. Public policy can have a positive impact on all aspects of green building through the thoughtful implementation of public incentives, product efficiency standards, public procurement, and investment.

End Users: Customers Drive Innovation

Encouraging end users can stimulate demand for new products and services. Markets develop through the interaction of producers of goods and services and the end users. End users include private (e.g. residents, business, industry, non-profits) and public entities (e.g. administration, educational facilities, utilities & services, public safety, health). Public policy can play an important role in the development of new markets. Public incentives can help speed the application of new technology that would otherwise be cost prohibitive. Also, policies governing public procurement can reduce costs through bulk purchasing and streamlining approval processes.

### Opportunities for the Green Valley Initiative

Opportunities exist for the Inland Empire to reap the rewards of the growing green economy. Focusing on the region's current set of industry strengths and the projected continued population growth, ample business opportunities will emerge for providers of products and services that help end users across the entire economy to leverage renewable sources of energy, improve efficiencies in energy, water, and materials use, and reduce the greenhouse gas emissions overall.

In short, the Green Valley Initiative can play a critical role in promoting both demand side (end user, energy efficiency) and supply side (renewable energy, technology producer) strategies while helping to match demand and supply in the region.

Opportunities exist for the Green Valley Initiative to do the following:

- Make the business case for green innovation
- Promote application of green products and practices in clusters
- Stimulate green producers and service providers
- Intermediate the connection between demand and supply