

Victor Valley Economic Development Authority

Target Industry Analysis

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1.0 Introduction

Victor Valley has been marketing to target industries that were identified over five years ago based on input from local member communities and other regional organizations (County of San Bernardino Economic Development and the Inland Empire Economic Partnership). A formal study of industry sectors was not conducted to identify targets. With changes in the economy and business base, the Victor Valley Economic Development Authority (EDA) determined that it is an appropriate time to revisit, reaffirm and/or identify new target industries for which the region can assemble a compelling business case.

1.1 What is a Target Industry Study?

A Target Industry Study (TIS) is an analytical method of identifying a community's best fit with primary industries – those industries that would most benefit from the community's assets and be willing to expand and/or relocate to the area – and industries that bring value to the community in the form of investment, jobs, payroll and local purchasing.

A Target Industry Study provides a community with a list of potential industry clusters to “target” and allocate resources to enhance and diversify the economic base. The study involves analysis of:

- Industry trends and growth in the region and in select geographic locations;
- Support industries to existing basic targets; and
- Geo-economic assets of the community.

1.2 Methodology

The process of this Target Industry Study for the Victor Valley EDA consisted of five steps including market trend analysis, industry research and personal interviews.

1. Looked at industry trends in San Bernardino County and Southern California region to identify patterns of growth, employment, payroll, and number of establishments. This research identified industries that are currently represented in the local regional economy and how they have performed over the past several years. Several guidelines were applied to identify the types of industries that could be targeted for Victor Valley.
2. Telephone interviews were conducted with international site location consultants and other key influencers to gather insights on their perspective on: (a) Victor Valley's assets and barriers for business attraction and expansion; (b) industries they see are having the most growth and investment activity in the United States and California; and (c) suggestions for industry targets based on their perception of the region.

3. Research was then conducted on those industries rising to the top from the first two steps to uncover opportunities at the industry sub-sector level and to enhance industry understanding.
4. Victor Valley's assets, strengths, weaknesses, and barriers to development and business growth were documented from interviews, website research and Chabin's experience working with Victor Valley EDA and in the region. Based on this intelligence, the list of industries was further refined.
5. The final step of this project was to prepare the report documenting the data, analysis, interview results and research findings.

2.0 Analyzing Industry and Employment Data

Data analysis is the first step in the process of identifying industries and targets for business attraction to the Victor Valley region. The process focuses first on historic and projected industry trends. Then, through a screening process, identifies industries within clusters that would best fit with Victor Valley and provide opportunity for economic growth. Data sources used for analysis include ES202 Data, Minnesota IMPLAN Group; Census Bureau, Annual Survey of Manufacturing, Bureau of Economic Analysis, and Dun & Bradstreet. Industries that pass all screens are grouped into clusters and reviewed for compatibility with Victor Valley business climate.

2.1 Industry Trend Analysis – Screen #1

The screening for initial data analysis includes:

- Industry presence in the region
- Historical performance and positive projected national growth (2001 - 2007)
- Industries leaving the Los Angeles/Orange County area
- Fast-growing industries based on 10 percent or more employment growth from 2001 to 2007
- Manufacturing capacity utilization of 60 percent or more¹
- Average wages of \$35,000 or more
- Three or more firms currently located in the base area²

This initial screen of industry trends reveals the following growth industries:

¹ Defined as the ratio of actual manufacturing output to potential full capacity output

² Riverside/San Bernardino Metropolitan Statistical Area

**FIGURE 1
GROWTH INDUSTRIES
RIVERSIDE/SAN BERNARDINO METRO AREA**

Growth industry targets for Victor Valley include basic industries with a growth rate of 50 percent or more from 2001 to 2007, or absolute growth of 500 or more. They have 2007 employment of 250 or more and at least 4 local firms in the Riverside/San Bernardino area. These are also industries with positive projected employment and output growth nationally, manufacturing capacity utilization of 65 percent or more, and local average wages of at

NAICS	Description	Historic Growth	2007	Projected Annual		Manufg Capacity Utilization
		2001-07 Percent	Riv/SB Avg Wage	U.S. Growth Employment	2006-2016 Output	
Food Processing						
311991	Perishable prepared food manufacturing	558%	\$35,779	0.20%	1.40%	68%
424470	Meat and Meat Product Merchant Wholesalers	60%	\$36,006	0.70%	5.00%	
Infrastructure Development and Support						
327331	Concrete block and brick manufacturing	68%	\$42,695	0.70%	1.80%	71%
332311	Prefabricated metal buildings and components	112%	\$42,736	0.50%	1.80%	65%
	Brick, Stone, and Related Construction Material Merchant Wholesalers	319%		0.70%	5.00%	
423320	Wholesalers		\$49,355			
423330	Roofing, Siding, and Insulation Material Merchant Wholesalers	256%	\$52,456	0.70%	5.00%	
	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	76%		0.70%	5.00%	
423720	Merchant Wholesalers		\$55,895			
517410	Satellite telecommunications	381%	\$50,798	0.50%	4.90%	
	Electrical Apparatus and Equipment, Wiring Supplies, Merchant Wholesalers	56%		0.70%	5.00%	
423610	Wholesalers		\$57,495			
Medical Devices						
339115	Ophthalmic goods manufacturing	1521%	\$39,787	0.10%	4.30%	77%
325412	Pharmaceutical preparation manufacturing	48%	\$73,117	2.20%	4.30%	67%
	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	171%		0.70%	5.00%	
423450	Wholesalers		\$37,159			
Logistics						
493120	Refrigerated warehousing and storage	313%	\$38,598	2.10%	3.80%	
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	78%	\$49,278	0.70%	5.00%	
423210	Furniture Merchant Wholesalers	178%	\$38,480	0.70%	5.00%	
424410	General Line Grocery Merchant Wholesalers	147%	\$41,924	0.70%	5.00%	
423440	Other Commercial Equipment Merchant Wholesalers	58%	\$36,962	0.70%	5.00%	
Financial and Insurance Service Centers/Back Office						
522320	Financial transaction processing and clearing	297%	\$49,336	0.80%	3.70%	
523930	Investment advice	92%	\$42,796	3.90%	10.60%	
524114	Direct health and medical insurance carriers	243%	\$58,741	0.20%	1.30%	
524126	Direct property and casualty insurers	52%	\$61,884	0.20%	1.30%	

Complete data for the Growth Industries analysis can be found in Appendix A. Supporting documentation — raw data tables of the Historical Industry Trends for Riverside/San Bernardino, Los Angeles, and Orange County Metropolitan Statistical Areas — is also provided in the appendix (Appendices B, C, D).

Analysis

The fastest growing industries in the Riverside/San Bernardino region (2001-2007), in terms of absolute job growth, include: discount department stores, restaurants, temporary help services, professional employer organizations, supermarkets, general warehousing and department stores. Each of these industries added between 5,000 and 14,000 jobs during this time period. All of these industries have moderate to strong projected employment growth nationally over the next ten years. However, given the

currently weak consumer economy, these employment figures may have slipped in the past year.

Absolute and percentage job growth were the initial screening criteria used in analyzing regional trends. Because the targets were limited to basic industries — those that bring in new wealth from outside the community — many of the industries meeting the “highest absolute growth” criteria are not included in the final list. All of the high growth industries were then screened based on positive projected employment growth nationally.

Another screening criterion used was “existing industry presence in the region.” This indicates general compatibility with a location in the outer parts of the LA Basin and potential for expansion within that area. The regional portion of the analysis revealed 21 industries in six clusters that met all screening criteria. They are: infrastructure development and support, food processing, logistics, medical devices, finance and insurance service centers/back office, and renewable energy.

Some of these clusters such as logistics represent existing targets already identified for the Victor Valley so are validated by this analysis and be expanded. Other clusters like renewable energy represent new opportunities for the Victor Valley.

2.2 Industry Trend Analysis – Screen #2

In addition to looking at regional industry performance, this analysis specifically analyzed industry growth and movement from Los Angeles and Orange Counties to identify industries that could potentially expand in Victor Valley. The diseconomies of scale that occur with intense urbanization have resulted in a wave of business migration to other parts of the state and to neighboring states. The Victor Valley may provide fertile ground for industries that are seeking a lower cost location and more favorable regulatory climate, but still need to serve markets in the LA Basin.

Growth industry clusters that appear to be migrating and leaving areas such as Los Angeles and Orange Counties include food processing, medical devices, infrastructure development and support, logistics and finance and insurance service centers/back office. As with the regional analysis, some of these clusters represent existing targets already identified for the Victor Valley that are validated by this analysis while other industries may be new to the Victor Valley region.

**FIGURE 2
POTENTIAL TARGET INDUSTRIES LEAVING LOS ANGELES/ORANGE COUNTY
WITH STRONG NATIONAL GROWTH PROJECTIONS**

Industries with employment losses of 500 or more in either Los Angeles or Orange Counties, positive projected national growth, capacity utilization over 65%, average wage over \$35,000, 5 or more firms currently in the LA/Orange region, and an existing local presence of 100 or more employees in

NAICS	Description	LA/Orange Employment		Historic Growth 2001-07		2007 LA/Orange Avg Wage	Manufg Capacity Utilization
		2001	2007	Absolute	Percent		
Food Processing							
311812	Commercial bakeries	8,485	7,109	-1,376	-16%	\$41,200	76%
Medical Devices							
325412	Pharmaceutical preparation manufacturing	8,337	7,367	-970	-12%	\$62,799	67%
339115	Ophthalmic goods manufacturing	2,920	2,532	-388	-13%	\$48,851	77%
Infrastructure Development and Support							
517410	Satellite telecommunications	7,189	3,297	-3,892	-54%	\$65,672	
	Electrical Apparatus and Equipment, Wiring Supplies, and Related				-25%		
423610	Equipment Merchant Wholesalers	9,781	7,318	-2,463		\$72,042	
Logistics							
493190	Other warehousing and storage	2,067	1,415	-652	-32%	\$39,378	
423110	Automobile and Other Motor Vehicle Merchant Wholesalers	8,418	6,189	-2,229	-26%	\$74,568	
	Women's, Children's, and Infants' Clothing and Accessories				-19%		
424330	Wholesalers	14,190	11,543	-2,647		\$59,002	
423690	Other Electronic Parts and Equipment Merchant Wholesalers	23,497	11,540	-11,957	-51%	\$95,289	
Financial and Insurance Service Centers/Back Office							
524126	Direct property and casualty insurers	17,882	15,440	-2,442	-14%	\$80,236	
Auto							
336991	Motorcycle, bicycle, and parts manufacturing	1,820	1,225	-595	-33%	\$38,497	85%

The full data table entitled "Potential Target Industries Leaving Los Angeles/Orange County" is included as Appendix E.

2.3 Data Analysis Summary

The industry trend data analysis identified five manufacturing and distribution target clusters and one non-manufacturing target clusters. A full listing of the target clusters and specific industry NAICS codes for each cluster are provided in Appendix F. This list becomes the universe of potential final target industries for the Victor Valley EDA.

The Victor Valley has had a significant amount of development in the past five years, outpacing many other parts of the Inland Empire. However, much of the growth has been in housing and related non-basic industries that have slowed to a crawl. The Victor Valley is geographically removed from other more urbanized parts of the Los Angeles Basin and continues to offer a lower cost location without some of regulatory constraints and other urban issues. Despite current conditions, the Victor Valley is poised for future economic development when national and regional conditions improve. The logistics industry is well established and there are opportunities to continue to diversify into other basic and support industries described below.

**FIGURE 3
POTENTIAL INDUSTRY TARGETS FOR VICTOR VALLEY**

Target Cluster	Existing Target Industry	Historic Growth in Riv/SB	Leaving LA/Orange	Number of Firms in Riv/SB	Projected Employment Growth*	Projected Output Growth*	High Wages**	Diversify Economy	Strong County Presence***
Infrastructure and Development Support	+	+	+	364	0.67%	4.98%	++	+	++
Food Processing	--	+	+	18	0.10%	1.20%	+	+	--
Medical Devices	+	+	+	117	1.05%	4.69%	++	+	+
Finance and Insurance Service Centers/Back Office	--	+	+	404	0.74%	2.72%	++	+	++
Logistics	+	+	+	662	0.08%	3.37%	+	--	+++
Renewable Energy	--	--	--	255	3.08%	4.49%	++	+	+

* Based on national projections by industry

**Average local wage above \$45,000 = ++. Note that all target industries have average wages above \$35,000 indicated by +.

***Over 5,000 employees in San Bernardino County =+++; over 2,500 employees=++, 1,000 to 2,500=+.

2.3.1 Potential Manufacturing and Distribution Target Industry Clusters

Infrastructure and Development Support is a broad based category that arises in two components of the analysis (regional growth and leaving Los Angeles and Orange Counties) but with different industries in each case. It is an existing target for the Victor Valley but not currently well defined. As a group, these industries have moderate projected employment growth, above average wages and all have an existing presence in the larger region. This mixed group of industries that includes various types of building product manufacturing and wholesale, satellite communication, bicycle manufacturing would diversify the local economy.

Medical Devices is an industry cluster that also came out of multiple components of the analysis (regional growth and leaving LA/Orange). It includes a pharmaceutical and ophthalmic goods manufacturing as well as related wholesalers. This cluster has high wages, strong long-term national growth projections, and an existing presence in the larger region. This cluster has also been identified as an existing target cluster for the Victor Valley although it may be a longer-term target due to work force and real estate requirements.

Food Processing is a small cluster that includes just two niche industries based on regional growth trends. These include perishable prepared food manufacturing and commercial bakeries. These industries are not reliant on a local agricultural base. They are high value added and have reasonably strong historic and long term projected growth.

Renewable Energy is a new industry cluster and somewhat challenging to describe in terms of current NAICS industry codes. The focus for the Victor Valley is on manufacturing and wholesale/distribution of solar and wind products. However, each of these products represents only a small segment of the industries in the NAICS codes in which they are included. Historic and projected industry growth trends are not specific to

renewable energy. That said, investment in infrastructure to support renewable energy is increasing, particularly in high growth areas. Demand will continue to be driven by both environmental concerns and price pressures from traditional energy markets.

Logistics industries such as warehousing and wholesale are suppliers to a wide range of manufacturers and are also a growth industry in the region. These industries also tend to be leaving LA and Orange Counties in significant numbers, assumably due to cost. Logistics industries may be able to link to activities at the Southern California Logistics Airport from a location in the Victor Valley and could serve regional manufacturers shipping to other parts of the country. There could also be opportunities related to shipments coming in through the Port of Long Beach. National growth projections for this cluster are above average for both employment and output.

3.2.2 Potential Non-Manufacturing Target Industry Clusters

Finance and Insurance Service Centers/Back Office includes a range of industries including financial transaction processing and insurance claims centers. These are higher value, higher paying activities than standard call centers. The Victor Valley is a good location for such industries and they are a good match with the local workforce. The key is to have available office space at a reasonable price. All of the specific industries selected for this cluster have an existing presence in the larger region.

3.0 Key Influencer Interviews

In addition to the data analysis of industry trends another step in the selection process involved interviews of professionals working with companies in the potential target clusters and others who represent the Victor Valley in their geographic responsibility for economic development-related activities. The findings provided insightful and complimentary primary research for determining Victor Valley's targets.

Site consultants who conduct numerous international site searches for corporate clients each year were interviewed for their perceptions of Victor Valley and their ideas for ideal target industries. A number of the site location consultants interviewed have screened the region and nearby communities for projects.

Those interviewed were:

- Dave Freitas, CalBIS
- Don Schjeldahl, Austin Consulting
- Jim Renzas, Location Management Services
- Robert Hess, NKF Consulting
- Sam Pruitt, Site Selection Services
- Shari Barnett, Cushman & Wakefield Global Consulting

3.1 Findings

The purpose of the interviews was to take into consideration potential target industries based on experienced site location professionals' perceptions of the Victor Valley region. The interview findings shed light on industry sectors that are actively expanding and may have substantial opportunity for growth in the Victor Valley. Many of the suggestions were derived from observations of industry trends while they worked site selection projects and being directly involved in growth strategies of companies within specific industry sectors.

3.1.1 Suggested Industries

The following industries were mentioned multiple times by different interviewees:

- Food Processing
- Consumer Products
- Building Materials and Construction Products
- Renewable Energies/Solar — components for solar; initially will see growth in assembly plants then will move to vertically integrated operations; components will be imported so the Foreign Trade Zone is a critical advantage
- Renewable Energies/Wind — demand presently exists, although there is a ten to fifteen year window of opportunity before industry capacity is saturated; not a lot of

small players in the industry and investment is driven by a few (i.e. Mitsubishi, General Electric, Siemens, and others)

- because of their size, transporting the turbines is a challenge and special permit fees add to costs so logistics is critical; as a result, turbine component manufacturing is being clustered close to final destination
- recommendation was made to build the Victor Valley cluster around components, metal fabrication, and maintenance of the equipment; a good fit for Victor Valley because the aerospace and precision manufacturing skills exist

3.1.2 Victor Valley's Competitiveness and Other Insights

- Using "leaving LA" (to get away from the congestion, high cost, etc) as screening criteria is reasonable for companies that want to expand or split operations and keep multiple operations in close proximity. However, companies looking to relocate would move further away from Los Angeles than the Victor Valley Region.
- Lower cost industrial land and fully-served sites is a strength of the Victor Valley Region.
- Transportation infrastructure could be a problem for some sites/areas in Victor Valley; road improvements and extensions were planned but what is the status?
- Not receiving a lot of inquiries on San Bernardino / Inland Empire area; biotech firms are looking at Bay and San Diego areas; food processing is looking at Los Angeles; and renewable energy firms are looking at San Diego.
- Most activity is in Clean Tech/Renewables, Food Processing, Other Manufacturing, Biotech firms.
- California as a whole is not getting much interest right now. Those states offering the best incentives are getting the action. For example: Massachusetts just passed a \$1 billion biotech/energy incentive bill. Michigan has offered an incentive package on a specific project for as much as \$27,000 per employee.
- One site consultant said that California is not recommended for back office projects due to the cost of doing business and labor laws. The only back office operations that may consider California are those that *have* to be in the state or near a particular market.
- During a visit couple of years ago the cost of housing was rising by 40 percent. One site consultant questioned if workers are losing homes and being driven out of the market.
- Access to workers at low-to-moderate wages could be a competitive advantage for Victor Valley.

As of June 2009, San Bernardino County was among the highest in foreclosures in California; 48,246 properties countywide and 12,494 (26 percent) in Victor Valley area.

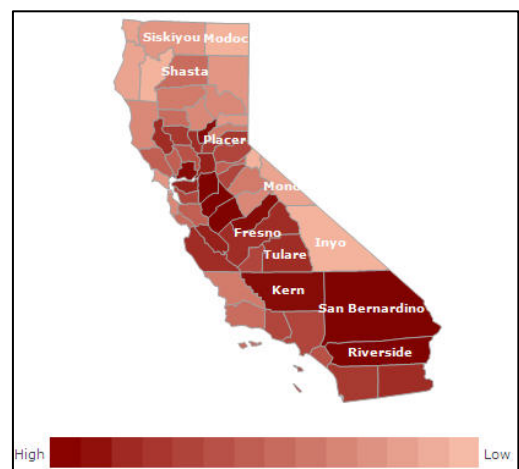


Figure 4 - California foreclosures as of 6/9/09 (www.realtytrac.com)

4.0 Matching Industries to Victor Valley Capabilities

In order to determine which industries are truly viable in the Victor Valley it is important to understand the area's strengths and weaknesses relative to industry needs. The following table presents an overview of observations from our team's experience in the Victor Valley, research, and perceptions of site location consultants. Factors listed are not all inclusive criteria for a competitive site search but focus on key issues that limit industry success, which in turn helps to determine appropriate targets.

Observations of Victor Valley's Capabilities	
Critical Business Factors Impacting Specific Industries	Assessment & Perceptions
Available workers (skilled and unskilled)	<p>Unemployment rates in the Victor Valley region have consistently exceeded state and national unemployment levels. This suggests labor is available. However workers' skill levels are, or are perceived to be, amenable to low- and mid-skilled manufacturing operations, distribution and service jobs. The population tends to have fewer bachelor degrees and more people with no high school diploma than the State or the U.S. as a whole (Source: Claritas).</p> <p>Victor Valley's base in mining operations, aviation, logistics and other industries should provide workers trained in large equipment maintenance, trucking, machine operators and setters, industrial machine mechanics, etc.</p> <p>For the medical devices cluster and certain industries in the renewable energy clusters highly skilled production workers are imperative, including engineers and scientific occupations which demand higher skills than is evident in the Victor Valley labor pool (see Appendix H, Primary Occupations).</p>
Reasonable wage rates and fringe benefits relative to competitor cities	<p>Victor Valley is perceived to have lower wages compared to most Southern California areas. California has some of the highest mandated benefits in the nation.</p>
Abundant and networked vocational and technical training providers that meet the needs of local employers	<p>Victorville Community College has some vocational courses applicable to the target industries (e.g. agriculture and natural resources, computer info, construction, electronics, auto tech, etc). The Di Hesperia's Concorde Career College's focus is training for health care occupations. San Joaquin Valley Junior College has recently located a campus expansion in Hesperia. Other technical training providers are not located in the immediate Victor Valley area.</p>

Observations of Victor Valley's Capabilities

Critical Business Factors Impacting Specific Industries	Assessment & Perceptions
Innovation opportunities with partner universities and research institutions	Research partner institutions which enhance innovation and work with businesses to develop new products are not readily available in Victor Valley. CSU San Bernardino would be the nearest venue that may provide innovation resources.
Ready-to-go sites and buildings served with all utilities, highway access, proper zoning and controls in place which will prevent undesired development. Reasonable lease rates or purchase prices are available.	<p>Victor Valley's land is a lower cost option for Southern California. There are some large land parcels but most are not shovel-ready and/or marketable with willing sellers.</p> <p>Industrial parks are adequate but not extensive. Industrial and Business Parks include – developed: SCLA and Foxborough; ready for development: North Apple Valley Industrial Specific Plan; planned: Adelanto Gateway Logistics Center, and Hesperia Industrial Rail Park.</p> <p>New or spec buildings are limited at best. But there are a number of available commercial/industrial properties noted as available for sale or lease. Typically, 50 percent of all site searches prefer an existing building.</p> <p>Of note, electric rates from Southern California Edison are perceived to be high while the municipal power plant in Victorville is considered more competitively priced.</p>
Adequate capacity of all infrastructure systems to accommodate the projected needs of new business and industry.	The work being done on the High Desert Power project and the formation of a municipal utility will provide reliable and affordable energy and is an advantage to business development in the area. More detailed information is needed on the level of services to each site being marketed.
A network of highways and arterial roads that supports the efficient movement of people and goods.	Overall there is good transportation infrastructure in the area. There are some traffic congestion spots but also plans underway to ease the congestion, link cities, and extend highways to facilitate traffic and truck traffic.
Availability of multi-modal transportation systems, especially rail-served sites.	Full intermodal services at some sites. Air access through SCLA. Union Pacific and BNSF rail lines.
Airport with scheduled service and cargo capabilities.	Air service at SCLA (cargo) and Ontario (passenger). Onsite U.S. Customs Port of Entry 24/7 services.

Observations of Victor Valley's Capabilities

Critical Business Factors Impacting Specific Industries	Assessment & Perceptions
<p>Incentives to lower cost of development and/or operations compared to other places.</p>	<p>Victor Valley communities have several incentive programs which help to compete with neighboring areas by reducing operating costs – Foreign Trade Zone, LAMBRA, Redevelopment Agencies, HUB Zones, and financing. Generally, California is not considered an “incentive rich” location.</p> <p>These programs are useful tools but most site searches conduct a thorough analysis of basic business operation factors before considering incentives. Incentives are often referred to as the “icing on the cake” or a “tie-breaker” but not the drivers for site location decisions.</p>
<p>Livability of Community.</p>	<p>Region offers a variety of neighborhoods and housing options. Housing stock is available, from executive to entry-level. Good school systems, parks and recreational opportunities.</p>

5.0 Target Industries for Victor Valley

This section of the report combines all research — data analysis and primary assessment research — to finalize target industry recommendations.

First, the industry data analysis identified six primary and secondary industry clusters for the Victor Valley region – Logistics, Infrastructure Development and Support, Food Processing, Medical Devices, Finance and Insurance Service Centers/Back Office, and Renewable Energy.

Since this research is based on historical data, we consider this a starting place for the recommendations. This stagnant data does not depict a complete picture, it is a snapshot in time.

Taking into account the recent financial crisis and recessionary market, we advise removal of the Financial and Insurance Service Centers/Back Office Cluster from the potential list of target industries. The recent turn of events, coupled with California's regulatory environment and no real estate building stock in the Victor Valley to meet the short timelines demanded by these projects, contribute to this decision and refinement of the list.

Based on the match of Victor Valley's capabilities to potential industries, the following industry clusters are recommended for Victor Valley EDA Marketing Program.

- **Logistics**
- **Infrastructure Development**
- **Food Processing**
- **Medical Devices**
- **Renewable Energy** – particularly solar assembly in the short-term and wind component manufacturing in the long-term

Keep in mind that these targets are recommended for proactive marketing. They are not exclusive as to whom the Victor Valley EDA will assist with site location services, but demonstrate the best focus and investment for strategic marketing.

6.0 Industry Intelligence

The remainder of this report contains intelligence on the drivers for the industry, recent market activities and possible marketing tactics to reach businesses within each industry sector. More extensive industry research can be found in the Appendix.³

Every industry sector places different values on site location factors based on their need to operate successfully and competitively. An overview of priority location factors for each industry cluster is presented below. Appendix G presents a more detailed matrix of industry importance factors for each industry sub-sector.

Summary of Industry Importance Factors					
Site Factor	Logistics	Infrastruc- ture Dev	Food Processing	Medical Devices	Renewable Energy
Access to Markets	High	Low/Med	Medium	Low	Medium
Access to Resources	Low	Low	Medium	Medium	Med/Low
Work Force	High	Medium	Med/High	High/Med	High/Med
Space	Medium	Medium	Medium	Medium	Medium
Financial Capital	Low	Low	Medium	Low	Medium
Public Sector Investment	Low	Low	Low	Med/Low	Low
Public Sector Costs	Low	Low/Med	High	Med/High	Medium
Quality of Life	Low	Low	Low	Medium	Low/Med

³ Appendix I – First Research Reports, Appendix H – Primary Occupations

6.1 Logistics Cluster

Specific target sub-sectors of the Logistics Industry cluster include:

NAICS	Description
423110	Auto and other motor vehicle merchant wholesalers
423120	Motor vehicle supplies and new parts merchant wholesalers
423210	Furniture merchant wholesalers
423440	Other commercial equipment merchant wholesalers
424330	Women, children, and infant clothing and accessories
424410	General line grocery merchant wholesalers
424470	Meat and meat product merchant wholesalers
493110	General warehousing and storage
493120	Refrigerated warehousing and storage
493190	Other warehousing and storage

The following industry notes are highlights from the complete First Research Industry Reports (presented in Appendix I), and U.S. Census Bureau, Material Handling Industry of America (MHIA).

- Orders Rising and Inventories Down** – Orders for manufactured goods rose slightly during the first quarter of 2009. Unfilled orders were down for several consecutive months; the longest streak of consecutive monthly decreases since 2002. Inventories were down eight consecutive months; again the longest streak of consecutive monthly decreases since 2004.
- Auto Parts Suppliers** – This is a well-developed existing cluster. Industry is in transition but is expected to recover with reorganization.
- Greater Use of Consultants (3PL)** – The evolution of many US companies to a leaner business model has created greater demand for logistic consultants. Companies are depending on the expertise to structure and direct their logistics operations. Additionally many consulting firms have expanded their areas of expertise, attempting to become one-source service providers.
- Logistics Services** – Victor Valley area has the advantages that High Throughput Distribution (HTD) warehouse facilities require. HTDs especially look for sites near airports and major highways.
- Larger, Electronically Equipped Warehouses** – To meet the sophisticated distribution functions new warehouses are larger and standard interior clearances are higher (36 feet). Computer systems control the identification and throughput of individual items so special wiring and outlets are required.

- **Specialized Equipment** – Customized material handling equipment, site-specific, comfortable, and safety products are in demand.
- **Outsourcing Warehouse/Distribution Functions** – Outside logistics firms are more likely to use public warehousing to fulfill smaller/local distribution needs.
- **Containerized Storage** – A relatively new service is self-storage containers that customers fill and store on their own or operator’s site. Many operators offer transportation services also.
- **Electronic Record Storage** – Some records storage firms are expanding their capabilities from paper documents to electronic records by building computer server farms in secure locations.
- **Wholesaler Consolidation** – Grocery store consolidation and growth of national chain restaurants are factors in the expanding wholesale food distribution industry. Distributors are expanding to service larger customers and wider geographical territories. Consolidations are likely to continue over the coming years particularly in the frozen foods and meat products.
- **Food Shipments** – It has become more expensive to ship food long distances due to fuel prices, which can be expected to rise again in the not so distant future. There are also food safety issues that are becoming a greater concern given the distance that food travels from farm to table.
- **Outsourced Logistics** – Food wholesalers are increasingly outsourcing some or all of their transportation and warehousing needs to third-party full-service logistics providers that offer cool and frozen warehouses, refrigerated trucks, rail service, and on-site “kitting” (assembly).

Action Steps for Logistics Cluster

- Review industry profiles in Appendix.
- Continue working on supply of shovel-ready real estate.
- Review occupations (Appendix I) and Industry Importance Factors (Appendix G).
- Update established proof points and data for the Business Case.
- Audit new tradeshow before exhibiting (see Appendix J for auditing guidelines).
- Stay on top of industry happenings by frequently reviewing industry association websites and publications (see below).

Tradeshows	Focus on industries where supply chain and logistics functions are a critical component of their operations (i.e. food processing)
Industry Websites and Publications	Logistics Today www.logisticstoday.com Transport Topics Online www.ttnews.com Logistics Management www.logisticsmgmt.com International Warehouse Logistics Association www.iwla.com The International Air Cargo Association www.tiaca.org American Trucking Associations www.truckline.com Distribution Management Association of Southern California www.dmasocal.com

6.2 Infrastructure Development Cluster

Target sub-sectors of the Infrastructure Development Cluster include:

NAICS	Description
327331	Concrete block and brick manufacturing
332311	Prefabricated metal buildings and components
423320	Brick, stone, and related construction materials
423330	Roofing, siding, and insulation material merchant wholesalers
423610	Electrical apparatus and equipment, wiring supplies
423720	Plumbing and heating equipment and supplies
517410	Satellite telecommunications

The following industry notes are highlights from the complete First Research Industry Reports located in the Appendix.

- Construction Industry is Highly Cyclical and Seasonal** – Two-thirds of all materials are used between May and October depending on the level of new construction. The traditional peak season for public highway contracts is April through August.
- Pricing Pressures** – Because basic construction materials are commodities, manufacturers compete largely based on price. With excess capacity in the US, industry returns have been low over the past years and a majority of capacity passed into foreign ownership, about 80 percent now. The top ten US producers control two-thirds of total US cement output. Foreign buyers, like Cemex, feel that increased US highway construction will keep their newly acquired plants busy for many years.
- Cost Advantages for Big Producers** – Technological improvements reduce energy costs for cement manufacturers that can afford to invest in new production plants but often only high-volume producers can afford or justify the investment. Because cement and similar products are commodities, with no branding potential, cost-cutting is the only avenue to higher profitability.
- Highway Funding** – The national highway system includes the nearly 45,000 miles and about 60 percent of the interstate system is concrete, especially in urban high-traffic areas. Although large-scale expansion of the highway system is unlikely, regular maintenance of the existing system will require large volumes of cement.
- Security Opportunities** – High-rises and government office centers are stepping up interior and exterior security measures and are using more precast concrete median barriers to augment security. Oversized decorative planters, an established line for which California specialty producers are especially known, should benefit from this new security concern.

- **New Materials Technology** – Research has improved and expanded applications for concrete. One example is a new high-performance fiber-reinforced concrete that is expected to increase earthquake resistance of structures making concrete more applicable in areas like California.
- **Decorative Concrete Methods** – New concrete decorating materials and tools are allowing concrete producers to create a more interesting textured “sensory” concrete for new construction applications and making it easier for ready-mixed concrete producers to enter the color concrete market. New coloring admixture measuring systems, which can produce precast, tilt-up, or cast-in-place buildings made of colored architectural concrete, improve the quality of colored concrete by eliminating human error and safety concerns and reducing waste.
- **Higher Value-Added Offerings** – To increase margins and differentiate themselves from competitors, many prefab metal building companies are investing in higher value-added products and services, expanding from supplying structural components to offering “engineered building systems” that are custom-designed. Some companies are also offering onsite assembly services, usually in conjunction with authorized resellers.
- **Metal Buildings Faring Well Against Traditional Construction, Repair, and Retrofit** – While the downturn in the construction industry has depressed all phases of the market, the market for metal buildings has suffered less than buildings that utilize more traditional materials such as lumber and bricks. As energy efficiency and total cost become more important, metal buildings and roofing systems are gaining popularity. Metal components offer advantages in strength and longevity over other building materials. The strength of metal components is particularly important in areas where retrofits must meet new building codes designed to lessen damage from earthquakes or hurricanes.
- **Green Building** – Growing interest in environmentally friendly construction could spur an increase in steel components in new construction. Using steel building products helps builders qualify their projects as “green buildings” due to their recycled content (light gauge steel framing contains a minimum of 25 percent recycled steel).
- **Sensing Devices, Telecommunications** – High-resolution sensing and satellite communications will benefit from additional government spending on defense. Spending is expected to increase for communication capabilities and satellite phone systems are finding success marketing the technology to the research, defense, shipping, and aviation industries.
- **Domestic Security Needs** – Federal, state, and local governments and private industry face huge demands to increase security. The largest participants in this market include major military contractors, big electronics makers, and private security companies, but small companies are also vying for a piece of the market. While much of the Department of Homeland Security's (DHS) contracts will likely go to large contractors, DHS wants to be an incubator to innovative small and midsize technology companies.

Action Steps for Infrastructure Development Cluster

- Review industry profiles (Appendix I).
- Continue working on supply of shovel-ready real estate.
- Review occupations (Appendix H) and Industry Importance Factors (Appendix G).
- Assemble Victor Valley proof points and value proposition relative to the industry drivers; prepare a Business Case for marketing.
- Audit new tradeshows before exhibiting (see Appendix J for auditing guidelines).
- Stay on top of industry happenings by frequently reviewing industry association websites and publications noted below.

Tradeshows	TFM Show www.tfmshow.com Construct2010 www.constructshow.com
Industry Websites and Publications	American Institute of Steel Construction www.aisc.org/ Concrete Products www.concreteproducts.com National Stone, Sand & Gravel Association www.nssga.org/ Portland Cement Association www.cement.org CTIA (association for wireless telecom) www.ctia.org PCIA (trade association representing companies that make up the wireless telecommunications infrastructure industry www.pcia.com)

6.3 Food Processing Cluster

Target sub-sectors of the Food Processing Cluster include, but are not limited to:

NAICS	Description
311991	Perishable prepared food manufacturing
311812	Commercial bakeries

The following industry notes are taken from: First Research Industry Reports (complete industry reports are located in the Appendix), California League of Food Processors, California Institute of Food and Agricultural Research at the University of California Davis.

- **Artisan Breads Produce Higher Margins** – Changing consumer tastes are driving the artisan/gourmet breads market. Smaller bakers with flexible production are capitalizing on the demand to produce and deliver a wider variety of products, often at higher margins, than larger bakers.
- **Par-Baking Popularity Grows** – A faster and more cost-effective alternative to baking from scratch, par-baking products are baked until approximately 90 percent cooked, then immediately flash-frozen. Grocery stores and restaurants buy frozen par-baked products from wholesale bakeries rather than hire highly skilled bakers or worry about products spoiling quickly.
- **Bakeries Enter Online Gift Market** – With specialty breads, sweets, and other items in gift baskets, bakeries are taking advantage of the growing Internet gift-buying market.
- **In-Store "Fresh" Baking Profitable** – Many supermarket branded "fresh baked" breads, rolls, bagels, and other products that have high margins are not actually baked from scratch at the store. Instead commercial bakeries supply stores with prepared dough that is partially baked then finished at the store, or fully-baked products that are flash-frozen and thawed at the store.
- **Demand Rises for Organic Foods** – Largely ignored by the bakery industry, the market for organic products is growing at a rate of more than 20 percent a year, according to Organic Consumer Trends.
- **New Products for Fast Food Market** – Specialty bakeries are taking advantage of fast food market growth. The Cheesecake Factory, formed a joint venture with Nabisco for a new product sold through refrigerated vending machines, which may lead to fast food restaurant distribution.
- **Extended Shelf Life Techniques** – Bakeries are extending product shelf life by increasing levels of enzymes and emulsifiers and using new packaging techniques. For example, new films and double wrapping techniques seal in moisture, extend product shelf life, and are tamper-evident.
- **Private-Label Snacks Market Growing** – Market share for private-label snacks has increased despite overall category stagnation. Private-labels account for about

5 percent of potato and tortilla chip sales, 10 percent of pretzel sales, and over 25 percent of snack nuts. Private-labels tend to do better in segments with lower sales volume and brand dominance (nuts, pretzels) than in the competitive chip industry.

- **Healthier Products** – The snack food industry's fastest-growing category is chips made with blended fruits and vegetables. Growing demand for products with no trans fats, low-sodium, baked and oat bran chips/pretzels.
- **Boosting Convenience Store Sales** – As grocery stores consolidate and reduce merchandising space, snack makers are revisiting their c-store sales strategy. C-stores and gas station markets make their money on impulse purchases like snacks, candy, and soda.
- **Reinventing Nuts** – High in Omega-3s, tree nuts are one of the few true healthy snacks; however, the product category has lacked innovation for many years. Frito-Lay may be well-positioned to capitalize on the stagnant nut category with its new TrueNorth line, all-natural mixed nuts and sweet nut crisps and clusters.
- **Promoting Sustainability** – Companies are capitalizing on the interest in sustainability and reduced carbon footprints by highlighting green manufacturing processes, domestically sourced raw materials, etc. Aseptic packaging (aka the "drink box) is a desirable alternative to cans and bottles. This packaging uses less energy to manufacture, fill, ship and store than virtually any comparable packaging.
- **Spicier Flavorings** – Manufacturers are creating new spicy snacks, responding to consumer interest in spicy and ethnic flavors and a growing Hispanic and Asian population. Hispanics comprise 15 percent of the US population, one-third of whom are under 18 (a key demographic for snack food manufacturers). Popular chip flavors include chipotle, habanero, wasabi, and tequila and lime.

Action Steps for Food Processing Cluster

- Review industry profiles in Appendix.
- Continue working on supply of shovel-ready real estate and spec buildings.
- Review occupations (Appendix H) and Industry Importance Factors (Appendix G).
- Assemble Victor Valley proof point and value proposition relative to the industry drivers; prepare a Business Case for marketing.
- Audit new tradeshow before exhibiting (see Appendix J for auditing guidelines).
- Stay on top of industry happenings by frequently reviewing industry association websites and publications (noted below).

California League of Food Processors	February 2-3, 2010 / Sacramento Convention Center. www.clfp.com
Process Expo / Pack Expo	October 5-7, 2009 / Las Vegas, NV October 31-Nov. 3, 2010 / Chicago, IL www.packexpo.com www.processfood.com/processExpo/2009
SNAXPO2010	March 3-6, 2010 / Fort Worth, TX www.snaxpo.com
IBIE International Baking Industry Expo	September 26-29, 2010 / Las Vegas, NV www.bakingexpo.org
Fancy Food Show	35 th Winter Fancy Food Show January 17-19, 2010 / San Francisco http://www.specialtyfood.com/do/fancyFoodShow/LocationsAndDates
Industry Websites and Publications	Food Processing Suppliers Association www.iafis.org National Association of Specialty Food www.specialtyfood.com National Frozen & refrigerated Food Association, Inc. www.nfraweb.org Grocer Manufacturers Association www.gmaonline.org Specialty Food Magazine www.specialtyfood.com/do/media Food Processing.com www.foodprocessing.com Food Online.com www.foodonline.com

6.4 Medical Devices Cluster

Target sub-sectors for the Medical Devices Cluster could include:

NAICS	Description
325412	Pharmaceutical preparation manufacturing
339115	Ophthalmic goods manufacturing
423450	Medical, dental, and hospital equipment and supplies

The following industry notes are highlights from the complete First Research Industry Reports located in the Appendix and from Pharmaceutical Research and Manufacturers of America, Pharmaceutical Industry Profile 2008 (Washington, DC: PhRMA, March 2008).

- **Medical Technology Unaffected by Economic Climate** – Over \$58 billion was spent on pharmaceutical research in 2007. While many industries are affected by economic downturns, the growth of medical technology remains largely undeterred due to its indispensable nature. Implanted defibrillators, female diagnostics, and cardiac monitoring equipment are rapidly growing market segments.
- **Favorable Demographic Changes** – Changing demographics of the US population favor the medical device industry, quite aside from the pace of technological innovation. From 2000 to 2020, the number of Americans over 65 will grow more than 50 percent.
- **Advances in Medicine** – New areas of development are the study of cell proteins, "proteomics," and use of interference RNA to block the effect of defective genes.
- **Public Policy** – Today, more research and development of new medicines is taking place in the U.S. than in any other country. Public policies (i.e. for patent protections and incentives for discovery and that support medical progress) are critical for large-scale projects.
- **Nanotechnology and DNA Chips** – Research is producing ultra-small devices and materials that may transform electronics, materials, medicine, and other fields. IBM, GE, Motorola, Hewlett-Packard, Lucent, NEC, and 3M have launched significant nanotech initiatives.
- **Individualized Drug Therapy** – By accounting for the differences in each individual's DNA, researchers hope to be able to tailor drugs for a particular person or for a particular defective gene.
- **Implantable Biosensors** – Using DNA chip or antibody technology, tiny sensing devices can be built that detect on an ongoing basis the presence of particular molecules inside the body, report findings for external review, or be used to automatically adjust the levels of various chemicals.
- **Advances in Wireless Technology** – Manufacturers of implantable medical devices and diagnostic equipment are rapidly adopting wireless capabilities into their designs.

Wireless technology gives doctors and patients better access to real-time data from medical devices, such as pacemakers and defibrillators.

- **Reprocessing Medical Devices** – The US healthcare system discards \$6 billion worth of obsolete medical supplies and devices each year. Due to increasing concern over the volume of medical waste, some medical devices are now recycled or reprocessed for resale. New FDA rules stipulate that all hospitals and third-party medical device reprocessing facilities must comply with the same FDA regulations as original equipment manufacturers of medical devices.
- **Non-Medical Testing** – Using clinical tests by employers (for drug and alcohol abuse); insurance companies (for life insurance policies); police departments (DNA fingerprinting, forensics investigation); and security agencies (identification) is expected to increase.

Action Steps for Medical Devices Cluster

- Review industry profiles in Appendix.
- Continue working on supply of shovel-ready real estate and spec buildings.
- Review occupations (Appendix H) and Industry Importance Factors (Appendix G).
- Assemble Victor Valley proof point and value proposition relative to the industry drivers; prepare a Business Case for marketing.
- Audit new tradeshows before exhibiting (see Appendix J for auditing guidelines).
- Stay on top of industry happenings by frequently reviewing industry association websites and publications (see below).

Medical Design & Manufacturing West	February 8-10, 2010 / Anaheim Convention Center www.mdmwest.com
Industry Websites and Publications	Medical Device Manufacturers Association www.medicaldevices.org Medical Devices Today www.medicaldevicestoday.com Biospace www.biospace.com Assoc. of Electrical & Medical Imaging Equipment Mnfrs www.nema.org

6.5 Renewable Energy Cluster

Target sub-sectors for the Renewable Energy Cluster focus on solar and wind power generation, including components such as:

NAICS	Description
332322	Sheet metal work
333414	Solar heating equipment
333611	Wind turbines and generators
334519	Solarimeters
335121	Residential solar fixtures
423330	Solar reflective film wholesale
423690	Solar cell wholesale
423720	Solar heating panel wholesale

The following industry notes are highlights from the complete First Research Industry Reports located in the Appendix and from the American Solar Energy Society, State of California, U.S. Department of Energy and other sources referenced in the footnotes.

- Continuing Interest** – With higher costs of energy and fuel in the United States, the once marginal technologies for renewable energy are now an area of incredible interest to businesses, municipalities, consumers and politicians. Renewable energy refers to sustainable, clean, alternative fossil fuels and nuclear energy, such as biomass, geothermal, hydroelectric, hydrogen, solar and wind.
- Continued Growth Expected** – To present the vast scope of the renewable energy industry cluster, more than 8.5 million new jobs, nearly \$970 billion in revenue, more than \$100 billion in profits and more than \$150 billion in federal, state and local tax revenues were realized in 2006 from this industry in the United States alone. Projections anticipate 40 million new jobs in this industry by 2030, accounting for nearly one in every four jobs.⁴
- Wind** – Demand exists but there is only a ten to fifteen year window of opportunity before industry capacity is saturated. It is expected that at least 90 percent of the new investment will go in the region spanning North Dakota to Texas because of the windspeed. (see Figure 5 and Figure 6)
- Wind Turbine Parts** – There are over 8,000 parts in a wind turbine. Many of these are electronics, gears, bearings, housing, and other metal products that are basic manufacturing industries.

⁴ Renewable Energy and Energy Efficiency: Economic Drivers for the 21st Century, 2007, Management Information Services, Inc. for the American Solar Energy Society.

- Wind Turbines / Maintenance** – Because of their size, transporting turbines is a challenge and often special permit fees add to the cost so logistics is critical. Turbine manufacturing is generally being clustered close to production sites. Existing wind farms in Victor Valley and the Southern California area will require maintenance. Because aerospace and precision manufacturing skills exist in Victor Valley, build the Victor Valley cluster around components, metal fabrication, and maintenance of the equipment.

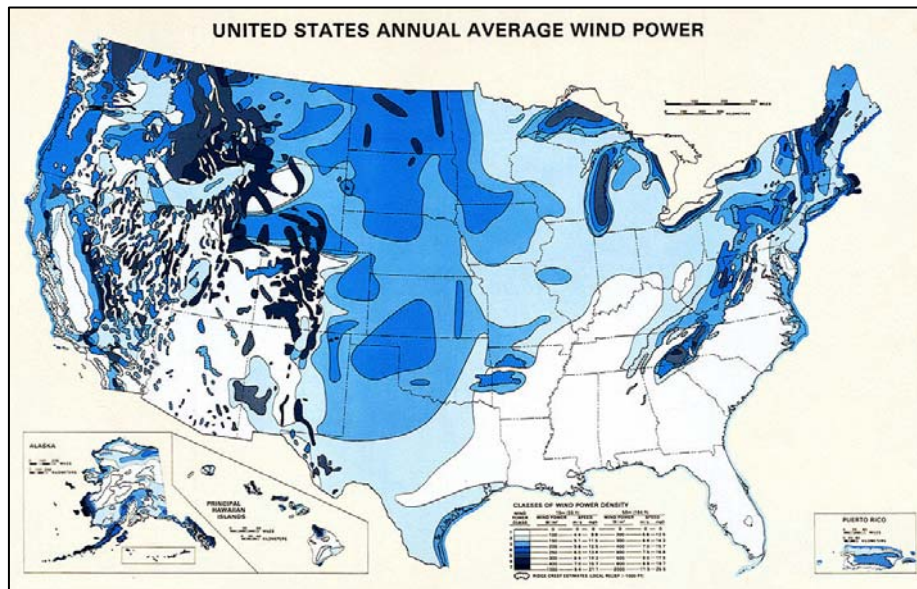


Figure 5 - U.S. Dept of Energy; Wind Energy Resource Atlas (www.nrel.gov)

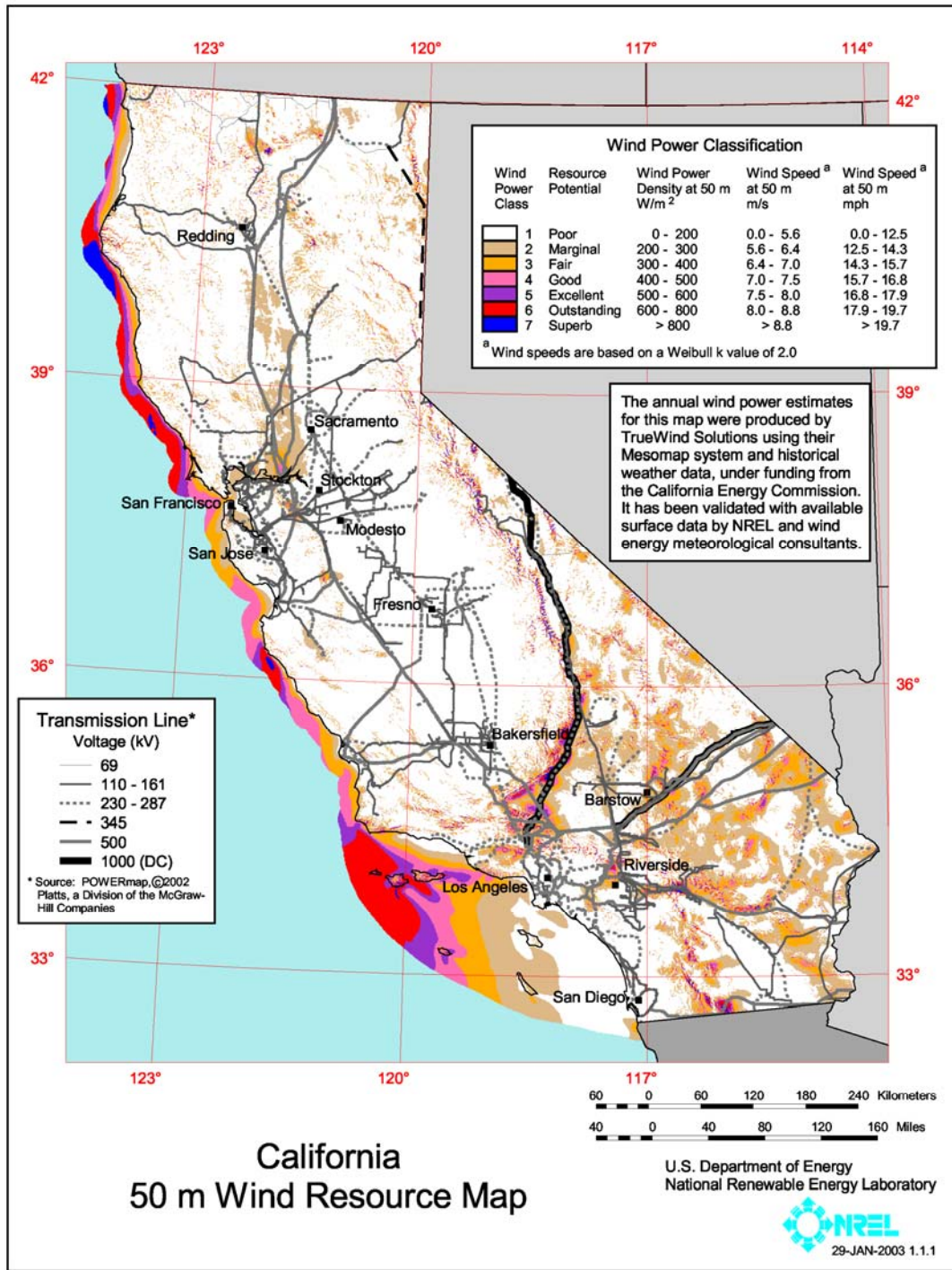


Figure 6 - U.S. Dept of Energy National Renewable Energy Lab (www.windpoweringamerica.gov)

- **Solar** – Initially will see growth in assembly plants, industry will then move to vertically integrated operations, components will be imported so the Foreign Trade Zone is a critical advantage. Solar will likely grow second fastest behind wind and there are lots of parts in the solar panel production that are standard manufacturing metal products and electronic components.
- **Use of Solar in Manufacturing Processes** – Many companies are producing their products exclusively with solar power and marketing accordingly. For example, the Frito-Lay plant in Modesto, which makes SunChips recently installed a new solar system. (see article, Appendix K)
- **Retailers Promoting Solar** – Major retailers are also leading in renewable energy utilization. For example, Walmart and Home Depot (Figure 7). There is opportunity for manufacturing kits for homeowners.

Figure 7

WALMART Store Finder | FAQs | Contact Us
Search

Home About Us Facts & News Health & Wellness Careers Community & Giving Diversity **Sustainability** Investors Suppliers

Home > Sustainability > Earth Month 2008 Login | Register

Earth Month 2008

YOU x 200 million = A brighter future

April is an important month for sustainability at Wal-Mart and Sam's Club. Throughout "Earth Month" we are highlighting products that will help our customers save money and make a difference in their own lives, in the lives of their families, in their communities and for the planet. You'll also see how your choices multiplied by 200 million can equal a brighter future for us all.

At Wal-Mart, from milk to mulch, and laundry detergent to light bulbs, more than 50 products spanning various aspects of sustainability – including conservation, waste reduction, and organics – will be featured on store shelves. In addition, Walmart.com will offer more than 500 eco-friendly items, including apparel, baby products and home furnishings at unbeatable prices (www.walmart.com/earth).

Sam's Club is working to improve the quality of life now and for generations to come by operating our business in environmentally responsible ways and by offering Members sustainable products. Visit www.samsclub.com/green to learn more about preservation, energy efficiency, reducing waste, and more.

Club chain, members can learn more about the Sam's Club eco-symbol and verbiage on club product displays and takes into account natural ingredients, Fair Trade Certification and

Think About This:
With the "Giving is Also an Art" program, Wal-Mart Mexico helps local indigenous communities develop a market for their handicrafts.
> More Thoughts

Related Information
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10% OFF Washers, Dryers and Dishwashers Learn More

Solar Power System Installation

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Professionally Installed Solar Power Systems

Join the move to renewable energy and let us install it for you

Now you can reduce or even eliminate your electric bill, increase your home's value and create a greener environment, all at the same time. It's a great time to join the move to renewable energy resources, and the perfect time to take advantage of the generous government and local utility financial incentives that can cut thousands of dollars off the price. It's Win - Win, for you and the environment!

- **Southern California Edison (SCE)** – is an active leader in renewables including biomass, hydro, solar, geothermal, and wind. SCE recently announced the nation’s largest rooftop solar installation, where 65 million square feet of warehouse rooftops will become solar generating stations. This development will produce enough electricity to power 162,000 homes.⁵
- **California’s Progressive Legislation and Incentive Programs** – (1) California Renewable Portfolio Standard (RPS) mandates that 20 percent of energy (investor-owned utilities) be generated from renewable sources by 2010. (2) California Global Warming Solutions Act (AB 32) mandates reduction of greenhouse gas emissions to 1990 levels by 2020. (3) California Solar Initiative⁶ has set a goal to create 3,000 megawatts (MW) of new, solar-produced electricity by 2017.
- **Federal Government Initiatives** – The Department of Energy (DOE) also promotes solar with the DOE Million Solar Roofs Initiative⁷.
- **Industry Growth Will Remain Strong** – Projected industry growth, worldwide, indicates that it will outstrip manufacturing capacity occurring in traditional industrial facilities where components are currently being made. Clean Edge and Co-op America in a recent study, Utility Solar Assessment Study, calculate the required investment in the United States alone reach ten percent energy sourcing from solar by the year 2025 to be in the range of \$450 billion to \$560 billion – an average of \$26 billion to \$33 billion per year.
- **Job Growth in Solar** – The number of jobs in photovoltaics⁸ (PV) will increase from 20,000 to 62,000 by 2015 [in the US]. Running counter to general economic trends, the largest portion of green business employment is in manufacturing. Eighty percent of these jobs are in manufacturing and the remaining 20 percent are in construction and installation. California is projected to lead in PV manufacturing investment.⁹ In California, manufacturing accounts for 41 percent of employment in the solar industry.¹⁰ Solar related firms are expecting to increase employment by up to 29 percent (approximately 5,000 jobs). At the same time, two out of three employers in this sector indicate difficulty find entry-level employees.¹¹
- **Appropriate Skill Sets** – The solar industry value chain requires very highly skills workers as well as lower-skilled technology jobs. For the Victor Valley area workers’ capabilities, the recommended niche is frame manufacturing for PV modules/solar panels. The frame adds structure and attaches to the mounting for installation.
- **Training** – The opportunity for drawing attention to Victor Valley exists not only in the available labor but Victor Valley College or the new Hesperia Campus of the San Joaquin Valley Junior College could capture national attention with programs to

⁵ www.sce.com/solar

⁶ <http://www.gosolarcalifornia.org/csi/index.html>

⁷ <http://www1.eere.energy.gov/solar/deployment.html#million>

⁸ Solar and photovoltaic are often used interchangeably but definitions are not identical. Solar is the technology of converting sunlight into electricity by using photovoltaic cells. Photovoltaic (PV) is the production of voltage by exposure to radiant energy (i.e. light)

⁹ Renewable Energy Policy Project, Solar PV Development: Location for Economic Activity, January 2005.

¹⁰ Clean Technology and the Green Economy, March 2008, California Economic Strategy Panel

¹¹ “California Solar industry Workforce Study Key Findings, 2008, Centers of Excellence and Workforce Development California Community Colleges.

support this industry. Employers in this industry clearly have great interest in education and training programs.¹²

Action Steps for Renewable Energy Cluster

- Review industry profiles in Appendix.
- Continue working on supply of shovel-ready real estate.
- Review occupations (Appendix H) and Industry Importance Factors (Appendix G).
- Assemble Victor Valley proof point and value proposition relative to the industry drivers; prepare a Business Case for marketing.
- Research supplier opportunities in the wind turbine manufacturing component
- Audit new tradeshow before exhibiting (see Appendix J for auditing guidelines).
- Stay on top of industry happenings by frequently review industry association websites and publications (see below).

Intersolar Show	July 14-16, 2009 / San Francisco, CA (2010 dates not yet published) www.intersolar.us
Solar Power International	October 27-29, 2009 / Anaheim, CA www.solarpowerinternational.com
Wind Power Conference and Expo	May 23-26, 2010 / Dallas, TX www.windpowerexpo.org
Industry Websites and Publications	American Solar Energy Society www.ases.org US Department of Energy www.energy.gov National renewable Energy Laboratory www.nrel.gov/solar www.nrel.gov/wind Database of State Incentives for Renewables and Efficiency www.dsireusa.org Solar Energy Industries Association www.seia.org California Solar Energy Industries Association www.calseia.org California Solar Initiative www.gosolarcalifornia.org Solar Buzz – Industry News www.solarbuzz.com Solar Daily – Industry News www.solardaily.com American Wind Energy Association www.awea.org North American Wind Power www.nawindpower.com National Wind Coordinating Collaborative www.nationalwind.org

¹² California Solar Industry Workforce Study, Key Findings, 2008, Centers of Excellence and Workforce Development California Community Colleges.

Appendix

- A. GROWTH INDUSTRIES – RIVERSIDE/SAN BERNARDINO METRO AREA
- B. HISTORICAL GROWTH TRENDS – RIVERSIDE/ SAN BERNARDINO
- C. HISTORICAL GROWTH TRENDS – LOS ANGELES
- D. HISTORICAL GROWTH TRENDS – ORANGE COUNTY
- E. POTENTIAL TARGET INDUSTRIES LEAVING LOS ANGELES/ORANGE COUNTY
- F. TARGET INDUSTRY SUMMARY
- G. PRIORITY LOCATION FACTORS
- H. PRIMARY OCCUPATIONS
- I. FIRST RESEARCH REPORTS
- J. TRADESHOW AUDIT REPORT
- K. SUN CHIPS ARTICLE

About the Consulting Team

Chabin Concepts' core competency is in realistic, achievable and measurable actions:

- Strategic thinking,
- Creative marketing, and
- Economic development program implementation.

Our goal is to position cities, counties and states to win new jobs and investment by creating a Roadmap supplemented with a Toolbox to achieve their goals and objectives – **delivering strategic solutions, tactics and tools to accomplish the mission.**

We are more than a consulting group – we are your solutions **network**. We use our network to bring our clients the best practices of renowned experts in urban and rural economic development, site location analysis and hands-on experience in implementing and managing competitive and results-oriented economic development programs.

We value every client and project, respecting the characteristics, heritage and goals of each community, their stakeholders and their economic development team. We commit to integrating our values, integrity and philosophy to create success:

- Involvement of the community and all partner organizations.
- Research that is tailored to your specific areas of interest and industry focus.
- An experienced and diverse team of professionals to bring you specialized expertise, knowledge and techniques.
- Innovative strategies and creative economic development tools.
- Tactical plans designed for implementation.
- Effective and successful economic development roadmaps - integrating resources, innovative tools and creative marketing - for communities to accomplish their goals consistent with their values.

The Chabin Team for the Victor Valley study included Victoria Doll, Principal, and Allison Larsen, Principal, with research assistance from Sarah Murley, Founding Partner of Applied Economics.



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