



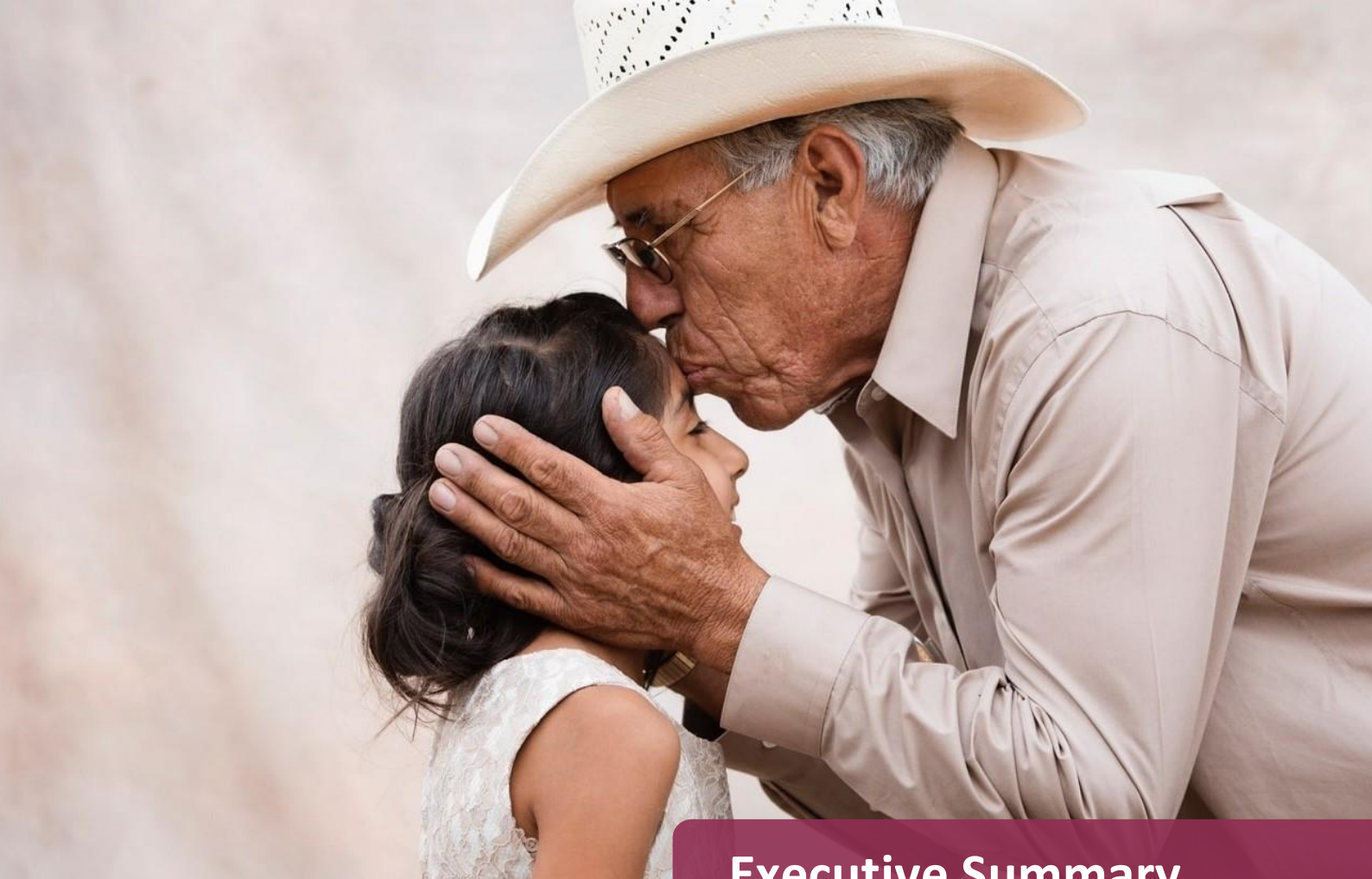
Kern County

Sub-Regional Plan for North Kern

September 2024

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Executive Summary

Since 2021, the State of California has administered California Jobs First, a \$600 million fund aimed at diversifying local economies, creating jobs, and improving economic resilience across the state. A group of local Kern County organizations formed the Kern High Road Transition Collaborative (KHRTC) in response to this funding opportunity and commissioned a series of Regional Plans identifying challenges and opportunities for creating a more equitable, inclusive, and sustainable economy in Kern County.

The Regional Plan Part II focused on economic development strategies across Kern County, identifying agriculture, clean energy, manufacturing, and transportation and warehousing as priority industries for North Kern. After its production, community leaders expressed a desire for more localized data and insights. Within North Kern, stakeholders identified Shafter as a location with unique strengths, challenges, needs, and aspirations, warranting a special addendum to the Regional Plan Part II.

Shafter is a North Kern municipality of approximately 24,000 people with strong and longstanding ties to the agricultural industry. Its residents predominantly identify as Hispanic or Latino. It has ample land resources and a strategic location, and other industries in the city, such as warehousing and transportation, are growing. Employment rates are

higher in the city than in Kern County overall, although wages remain below the county living wage. Shafter also faces roadblocks to sustainable growth, including employment declines in agriculture, low quality of existing jobs, and an undiversified economy. It also faces high climate risk due to regional drought, wildfire, and water risk. This has particularly acute effects on Shafter's heavily agricultural economy. Pollution created by current industries also poses a health and environmental concern.

This report identifies three high-potential industries that can drive Shafter's economic development.

The decline in Shafter's primary industry, agriculture, presents a compelling case for investing in sustainable agricultural technology (ag tech) and regenerative practices, which have the potential to increase the quality of jobs in the industry. In implementing these technologies, the city has the opportunity to increase historically low wages and improve job quality and stability, affecting a large share of the city's population. Shafter can foster sustainable agricultural innovation by supporting existing employers in adopting new technologies, incentivizing investment for ag tech manufacturers, and providing workers resources to transition to higher-skilled positions. For workers unable to transition to these new positions, agricultural entrepreneurship is outlined as a viable alternate path.

In clean energy, existing warehousing activity and ample land, sunlight, and flat terrain make solar energy production and storage particularly promising areas for development. The industry is still emergent in Shafter but is growing in North Kern on the whole. Although many jobs in this industry can be short-term in nature (e.g., construction jobs), permanent ones are often high-quality and can be part of a diversified strategy to drive Shafter's economic growth. Shafter can support the growth of the solar energy industry by addressing barriers and creating incentives for growth through public-private-community partnerships (e.g., addressing permitting challenges, supporting infrastructure needs, and providing financial incentives tied to high-quality jobs), developing advanced manufacturing for solar and wind components as a way to generate long-term employment, and leveraging existing workforce capabilities to enhance access to clean energy jobs.

In warehousing and transportation, Shafter's significant land assets, proximity to major transportation routes and industry hubs, and already growing warehousing industry position the city for continued growth. While the industry currently represents a small portion of employment in Shafter, the industry is growing in the area. For example, a major industrial park already present in the city recently announced plans for significant expansion. Although jobs in the industry can be low to medium quality, the distinctive features of Shafter's warehousing and transportation sector—such as planned development and advanced technology—enable it to provide high-quality employment opportunities. Shafter can support the continued growth of the high-quality transportation and warehousing industry by connecting residents to existing roles in the industry, ensuring

current and future warehousing developments meet environmental and labor standards, and attracting new warehousing investments which prioritize job quality and sustainability.

Additional growth enablers identified in Shafter include establishing advanced manufacturing task forces for ag tech and clean energy, investing in grid capacity for industrial clean energy use, and prioritizing affordable housing and accessible community services such as childcare, healthcare, and recreational facilities.



Chapter 1: Context

The regional economic overview outlined in the Regional Plan Parts I and II assessed the current status of Kern County’s economy, labor market, and industries; climate and environment; and public health—as well as the potential strengths, weaknesses, opportunities, and threats facing the region.¹

As noted in previous reports, these opportunities and threats vary widely across Kern County’s subregions. The following chapter focuses on the economic, climate, and health-

¹ Note: In the course of developing the Regional Plan Part II, the Kern Coalition interviewed more than 30 organizational stakeholders including labor, industry, government, community-based organizations, and environmental justice advocates. The Coalition also held 10 community engagement meetings (2 in each of the five subregions) in June and July 2024, with support from local community-based organizations. These built on 40+ community meetings that had been held in the process of developing the Regional Plan Part I: Addendum to the UC Merced Community and Labor Center 2024 Report. The Kern Coalition also administered surveys in multiple languages inviting residents to share their concerns, aspirations, preferences, priority sectors, and general ideas. Overall, more than 800 individuals across the county were engaged in the process. To promote accessibility, community meetings were held at 6pm PT to minimize conflicts with participant’s work schedules; offered access to materials in English, Spanish, and Punjabi, where applicable; included live translation to / from English, Spanish, and Punjabi, where applicable; included dinner and childcare; and compensated each attendee for their time with a \$50 food voucher.

related conditions in Shafter, specifically highlighting differences and similarities with the overall assessment conducted in Part II.²

Shafter Snapshot

City overview

Shafter is a community with a population of approximately 24,000 and a unique demographic profile. Shafter has been growing at an average annual rate of 1.17% over the past five years,³ and by some projections is set to grow as much as 70% by 2035,⁴ likely due to growing industries in the area and proximity to other larger cities such as Bakersfield. Its inhabitants predominantly identify as Hispanic or Latino, at 82.9% of the overall population, with only 14.3% identifying as white, and 1.7% as Black or African American. Additionally, the city's demographic profile reveals that only 81% of residents are U.S. citizens. Of those non-U.S. citizens, approximately 98% are Latinos.⁵

Shafter's economy is deeply rooted in agriculture, but the industry's broader challenges are driving the need for structural change. Agriculture in general tends to offer relatively low-quality and unstable jobs. This, combined with environmental threats like drought, is hindering the industry's ability to drive sustainable economic development.⁶

Labor market and industry

Shafter's labor market observed strong employment rates but faces challenges around the low quality of existing jobs. Overall employment is relatively high, with approximately 66%—or 15,840—of the city's 24,000 residents are of working age (16-64) and 63%—or 10,134—participating in the labor force. The unemployment rate of 7.5%⁷, which is low when compared to the rest of Kern County (at 10.5%), translates into ~760 unemployed people when applied to the labor force of 10,134. Still, the median annual per capita wage is \$30,898, well below Kern County's living wage of \$44,595.⁸ Additionally, 23.9% of inhabitants are below the poverty level,⁹ higher than the overall Kern County rate of 19.2%.¹⁰

Like the North Kern region at large, Shafter has an economy rooted in agriculture. The industry employs 21.5% of the city's workforce—following a 12.9-percentage-point drop from 2018 to 2022.¹¹ Other significant industries include retail trade (11.7%), health care

² Note: A more detailed subregional profile of North Kern can be found in Kern County's Regional Plan Part I: Addendum to the UC Merced Community and Labor Center 2024 Report for the Community and Economic Resilience Fund.

³ Source: [US Census Bureau](#)

⁴ Source: [Kern County - Comprehensive Economic Development Strategy \(2021\)](#)

⁵ Source: [US Census Bureau](#)

⁶ Source: Regional Plan Part II

⁷ Source: [US Census Bureau](#)

⁸ Source: [MIT Living Wage Calculator](#)

⁹ Source: [US Census Bureau](#)

¹⁰ Source: [US Census Bureau](#)

¹¹ Source: [Dun & Bradstreet \(2024\)](#)

(9.8%), and education (8%). Transportation and warehousing services account for around 5% of employment.¹²

Shafter’s agribusiness industry is diverse but shows consolidation around highly mechanized crops, such as pistachios and almonds, which are typically managed by large agribusinesses. Historically, cotton was the leading crop, but changing market demands and potential for increased profit margins have caused a shift towards grapes, alfalfa, and nut production (e.g., almonds, pistachios). Over 70 companies employ over 90% of the city’s agriculture workers.¹³ Top firms by annual revenues include The Garlic Company (\$158 million), Wonderful Orchards (\$157 million), S&S Sprayers (\$4.5 million), Wilson Ag (\$2.3 million), and A. Rodriguez & Son Harvesting (\$2.1 million).¹⁴ However, small agribusinesses may lack the same level of mechanization and access to financing for technology available to larger agribusinesses, which was flagged as a major challenge by stakeholders during interviews.¹⁵ This disparity in resources limits smaller businesses' ability to remain competitive and fully integrate advanced agricultural practices.

Additionally, the industry overall is experiencing downturn. Following county trends, agriculture is facing economic vulnerabilities to worsening climate conditions and rising operating costs. The quality of existing jobs also remains low as jobs are mostly seasonal, part-time, or unreliable.¹⁶ Rising operating costs, caused by climate-related operational challenges and rising costs of inputs such as fertilizers, are causing many agribusinesses to go bankrupt or forcing owners to sell their farmland (in many cases for solar energy projects).

Despite these challenges, Shafter also benefits from distinct competitive advantages that can be leveraged for growth, including land resources, a strategic location, and expanding industries. Shafter has an abundance of available land, sunlight, flat terrain, and proximity to major highways and rail networks. This positions the city as a prime location for logistics, transportation, and warehousing as well as other industries such as clean energy production and storage, as evidenced by the ongoing development at the Wonderful Industrial Park (WIP). The 1,625-acre facility owned by The Wonderful Company has become a major logistics and distribution hub, attracting large companies like Amazon and Walmart, and has recently announced plans for major expansion.¹⁷ Additionally, Shafter’s low operating costs, driven primarily by efficient infrastructure development, further enhance its competitive position for leveraging industrial growth and development.

¹² Source: [US Census Bureau](#)

¹³ Source: [US Census Bureau](#)

¹⁴ Source: [Dun & Bradstreet](#)

¹⁵ Source: Stakeholder interview September 25, 2024

¹⁶ Source: Regional Plan Part II

¹⁷ Source: [Shafter City](#)

In summary, Shafter boasts a healthy economy that can benefit from continued diversification, yet it also faces a pressing need to enhance job quality within its key industry—agriculture. Based on the current unemployment rate of 7.5%¹⁸ (given the labor force is 10,134,¹⁹ this implies ~760 unemployed people),²⁰ and the share of the population with full-time jobs living below county living wage (~4,186 people),²¹ it is estimated that at least ~5,000 high quality jobs are needed to significantly advance the city’s economic development goals. This number could be significantly higher when accounting for populations with part-time or seasonal jobs. This target could be accomplished by developing strategies that leverage current city strengths such as its land resources and growing industrial activity.

Climate and environment

Shafter faces significant climate-related risks, mirroring those experienced across North Kern and the Kern County region. These risks include more frequent and intense droughts,²² which may result in water scarcity for irrigation, intense cold snaps, and an anticipated increase in wildfire intensity.²³ Kern County as a whole is ranked in the 94th percentile nationally for the vulnerability of its population to climate change.²⁴ Shafter specifically has below-average air quality and is one of 10 communities selected for emissions monitoring under California’s AB 617, which aims to reduce emissions in heavily polluted, disadvantaged areas.²⁵ In Shafter, climate threats present increased risks of infrastructure damage from wildfires, greater economic strain on vulnerable populations due to reduced access to essential services, and increased costs associated with climate-related disruptions. Additionally, the Sustainable Groundwater Management Act (SGMA)²⁶, characterized by industry stakeholders as a significant threat to agribusinesses, restricts access to groundwater—a critical resource for Shafter’s agriculture—further exacerbating economic strain and operational challenges for the industry.²⁷

¹⁸ Source: [US Census Bureau](#)

¹⁹ Source: Ibid.

²⁰ Source: Ibid.

²¹ Note: The number of workers earning below the Kern County living wage was estimated by i) comparing the median wage for full-time employees in each of the industries listed by the US Census Bureau, to the county living wage benchmark of \$44,595 and classifying each industry as above or below living wage and ii) adding the number of workers in each of the industries classified as having median wages below the living wage. Given the lack of individual-level wage data, this method aims to act as a directional estimate of the minimum number of people with low quality jobs, realizing it can only serve as a baseline and is likely an underestimate, as it fails to consider temporary, part-time, or informal employment.

²² Source: [UC Merced](#) (2021)

²³ Source: [Kern Community College District](#) (2019)

²⁴ Source: Kern County - Regional Plan Part II

²⁵ Source: Kern County - Regional Plan Part I

²⁶ Note: The Sustainable Groundwater Management Act (SGMA) mandates the sustainable use of groundwater resources in California. It aims to address over-extraction and long-term water shortages, particularly in agricultural regions like Shafter, which heavily rely on groundwater for irrigation.

²⁷ Source: Stakeholder Interview: 9/16/2024

Current climate projections have serious implications for Shafter’s key agricultural and logistics industries. These industries contribute to environmental risks that can exacerbate climate challenges, such as increased emissions (e.g., from fuel combustion in logistics and agriculture) and resource depletion (e.g., high water consumption). Water scarcity threatens the productivity of the agriculture industry, driving up operational costs and putting pressure on crop yields. In logistics, stricter regulations on emissions will increase compliance costs, particularly for companies relying on diesel trucks. Worker health is another concern, with prolonged exposure to both extreme heat and air pollution potentially resulting in reduced productivity, increased absenteeism, and increased healthcare costs.²⁸

Health and education

While Shafter is serviced by several healthcare facilities, it faces challenges regarding coverage, healthcare workforce and transportation. Shafter is serviced by several outpatient clinics and specialized health centers, with full-service hospitals located close by (the closest is in Wasco, 9 miles from Shafter, and others are in Bakersfield, 19 miles away).²⁹ Still, there is limited public transportation connecting Shafter to nearby cities, making access highly dependent on personal vehicles.³⁰ Additionally, 8.6% of the city’s residents report lacking health insurance. Shafter’s patient-to-physician ratio is 2,021 to 1, well above the WHO-recommended 1,000 to 1,³¹ although slightly better than the Kern County average of 2,040 to 1.³² Health disparities are particularly pronounced among undocumented and low-wage agricultural workers, who face greater barriers to healthcare due to immigration status, working conditions, and lower incomes.³³

This lack of healthcare access combined with other prevalent health issues, such as work-related conditions, can hinder residents’ ability to participate in the workforce. Shafter’s agricultural workers also face a series of dangerous work conditions including heat (worsened by climate change), insufficient rest breaks, poor sanitation, wage theft, and exposure to pesticides, which may lead to a higher rate of heat-related deaths and illnesses, including heart attacks and strokes.³⁴

Shafter’s educational outcomes also reflect significant disparities compared to state averages. Only 10.7% of residents aged 25 and older hold a bachelor’s degree or higher, a rate well below the 19% average in Kern County and the California state average of 37%.³⁵ Educational outcomes are also influenced by social factors such as linguistic isolation,

²⁸ Source: Kern County - Regional Plan Part II

²⁹ Source: [Healthgrades](#)

³⁰ Source: [Shafter City](#)

³¹ Source: [NIH](#) (2018)

³² Source: [Data USA](#)

³³ Source: Kern County - Regional Plan Part I

³⁴ Source: Kern County - Regional Plan Part II

³⁵ Source: [US Census Bureau](#)

affecting many in the Latino community, limiting access to higher education and career advancement.³⁶ These barriers restrict economic mobility for a substantial portion of Shafter's workforce, making it more difficult for residents to access quality jobs that require advanced skills or degrees. However, Shafter's proximity to educational institutions such as Taft College (~15 miles) and California State University, Bakersfield (~20 miles) provides accessible pathways for residents to pursue higher education and workforce training. These nearby institutions offer a range of degrees, certificates, and transfer programs that can help close the educational gap and equip Shafter's workforce with the skills needed for quality jobs. By building stronger partnerships with these colleges, Shafter can further improve educational access and economic mobility for its residents, particularly within its predominantly Latino community.

In conclusion, Shafter faces notable challenges in both healthcare access and education.

When creating strategies for economic development, these two factors should be taken into account. Improved access to healthcare will be key to reducing absenteeism and increasing workforce participation, while training programs will be key to enabling access to qualified jobs.

Other enablers

Shafter relies heavily on personal vehicles, with limited public transportation options connecting the city to nearby areas. With 80% of workers driving alone to work and less than 1% relying on public transportation.³⁷ This dependence is particularly problematic given the distance to essential services, such as healthcare facilities located ~9 to 19 miles away and higher educational institutions ~15 to 20 miles from the city center. For residents without reliable access to cars, this lack of public transportation limits their ability to access healthcare, education, and job opportunities. Improving public transportation is essential for bridging these gaps, particularly for lower-income and underserved residents.

Similar to broader Kern County regional trends, Shafter faces challenges in workforce participation due to limited access to affordable childcare, a problem especially pronounced in its predominantly Latino population. Spanish-speaking communities experience barriers to securing childcare across the Kern County region.³⁸ With only 40% of women employed compared to 60% of men, the gender disparity in workforce participation is substantial. Additionally, the average family size in Shafter is 4.05, compared to 3.62 in Kern County,³⁹ indicating larger family responsibilities that further strain women's ability to engage fully in the labor market. The shortage of affordable and accessible childcare

³⁶ Source: Kern County - Regional Plan Part I

³⁷ Source: [US Census Bureau](#)

³⁸ Source: Kern County - Regional Plan Part II

³⁹ Source: [US Census Bureau](#)

services exacerbates these challenges, limiting economic mobility and workforce contribution, particularly among women in Shafter.

Conclusion and implications

Shafter benefits from growing industries that can continue to diversify, yet it also faces a pressing need to enhance job quality within its key industry—agriculture. Based on the current unemployment rate of 7.5%⁴⁰ (given the labor force is 10,134,⁴¹ this implies ~760 unemployed people),⁴² and the share of the population with full time jobs living below county living wage (~4,186 people),⁴³ it is estimated that at least ~5,000 high quality jobs are needed to significantly advance the city’s economic development goals. This number could be significantly higher when accounting for populations with part-time or seasonal jobs. Creation of these jobs should be pursued through industries that align with the competitive advantages of the area: land resources, a strategic location, and expanding logistics and warehousing activity. It is critical to address challenges regarding educational attainment and healthcare access when developing industry strategies in order to foster sustainable economic revitalization in Shafter and improve quality of life for its residents.

⁴⁰ Source: Ibid.

⁴¹ Source: Ibid.

⁴² Source: Ibid.

⁴³ Note: The number of workers earning below the Kern County living wage was estimated by i) comparing the median wage for full-time employees in each of the industries listed by the US Census Bureau, to the county living wage benchmark of \$44,595 and classifying each industry as above or below living wage and ii) adding the number of workers in each of the industries classified as having median wages below the living wage. Given the lack of individual-level wage data, this method aims to act as an estimate of the minimum number of people with low quality jobs, realizing it can only serve as a baseline and is likely an underestimate, as it fails to consider temporary, part-time, or informal employment.

Figure 1: SWOT analysis for Shafter

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Proximity to major transportation routes and logistics hubs (e.g., Wonderful Industrial Park) • Abundant land resources for industrial expansion • High employment rates (52.7%) • Strategic location near key clean energy and agricultural sectors • Strong agricultural foundation, with an opportunity for value-added processes • Low operating costs due to efficient infrastructure development 	<ul style="list-style-type: none"> • Educational attainment below state averages, limiting access to high-quality jobs • High percentage of workers earning below the county living wage • Air quality challenges exacerbated by industrial activities • Infrastructure limitations, including transportation and grid capacity for industrial clean energy use 	<ul style="list-style-type: none"> • Growth of the clean energy sector, particularly solar and energy storage projects • Potential for expansion in logistics and warehousing industry • Nearby colleges to access higher education and workforce development programs • Community interest in upskilling for clean energy and ag tech jobs • Investment in advanced manufacturing and value-added agriculture 	<ul style="list-style-type: none"> • Climate-related risks to key industries (e.g., drought impacts on agriculture) • Declining job quality in agriculture due to environmental factors • Competition from nearby cities in attracting logistics and manufacturing investments



Chapter 2: Industry Prioritization

The analysis in the Regional Plan Part II identified priority industries for the North Kern region, including agriculture, clean energy, manufacturing, and transportation and warehousing. The analysis in this chapter aims to validate similarities and differences between priority industries at the subregional level to identify priority industries specifically for Shafter. This process identified sustainable agriculture (including entrepreneurship), clean energy, and quality warehousing and transportation as priorities for the city.

Industry prioritization and rationale

Industries were analyzed with the goal of identifying the two or three industries with the highest potential for economic development and quality job creation for Shafter.

Supporting strategies were then developed and are included in Chapter 3 of this report.

This exercise analyzed industries that were (i) identified as “highly relevant” or “relevant” in the Regional Plan Part II industry analysis, and/or (ii) were raised as high-potential industries by members of the Kern Coalition and stakeholders interviewed. This included an analysis of (i) sustainable agriculture, quality transportation and warehousing, clean energy and manufacturing and (ii) entrepreneurship and advanced manufacturing as a standalone industry.

In this exercise, each industry was evaluated⁴⁴ across four key categories:

- **Regional assets** that can support an industry's growth, including natural resources, geographic location, and existing infrastructure in the region
- **Job quality**, including current or projected job numbers as well as average wages
- **Market signals** that suggest favorable conditions for industry development or growth, such as anticipated investments, supportive government policies, or emerging market trends
- **Community desirability**, which refers to community desire for jobs in the industry, based on insights gathered from community and stakeholder interviews conducted during Phase II, as well as stakeholder interviews conducted in the course of preparing these subregional plans

Additionally, each industry was also evaluated on the basis of its alignment with equity, climate, and regional strategies to assess compliance, or in its absence, identify any necessary steps for compliance to be achieved.

Based on these factors, the three industries with the highest potential for Shafter were identified: sustainable agriculture (including entrepreneurship), clean energy, and quality warehousing and transportation. These industries are estimated to bridge the gap towards the ~5,000⁴⁵ minimum quality jobs outlined in Chapter 1 as required by Shafter to support

⁴⁴ Category criteria:

Regional assets: High (<1 hour distance), Medium (1-2 hour), Low (>2 hour)

Job quality: High (if both of the following criteria were high), Medium (if one of the criteria was high), Low (if both were low).

- Number of jobs: High (Projections can reach 50% of the target metric of job creation), Medium (20-50%), Low (0-20%)
- Wage: High (10% above county living wage, which is 44K according to the MIT Wage Calculator), Medium (<= 10%), Low (below 44K)

Market signals: High (Multiple factors: 2-3 incoming opportunities specific to subregion), Medium (1-2 incoming opportunities that are specific to the region at large, not the subregion), Low (limited qual data suggesting opportunities to (sub)region)

Community desirability: High (Ranked 1-3 in community interviews and/or highly ranked in qual data), Medium (highly ranked by some community members, but inconclusive via qualitative data), Low (low ranked by all qualitative data sources)

⁴⁵ Note: Based on the current unemployment rate of 7.5% (given the labor force is 9,374, this implies ~760 unemployed people), and the share of the population with full-time jobs living below county living wage (~4,186 people), it is estimated that at least ~5,000 high quality jobs are needed to meet the city's economic development goals. The number of workers earning below the Kern County living wage was estimated by i) comparing the median wage for full-time employees in each of the industries listed by the US Census Bureau, to the county living wage benchmark of \$44,595 and classifying each industry as above or below living wage and ii) adding the number of workers in each of the industries classified as having median wages below the living wage. Given the lack of individual-level wage data, this method aims to act as a directional estimate of the minimum number of people with low quality jobs, realizing it can only serve as a baseline and is likely an underestimate, as it fails to consider temporary, part-time, or informal employment.

its economic development goals. A summary of the prioritization exercise and criteria can be found in Figure 1 below.

Figure 2: Shafter industry prioritization

Industry	Regional Assets	Job Quality		Market signals	Community Desirability	Priority
		# Jobs	Wage			
Sustainable Agriculture (Incl. Entrepreneurship)		Employs 22% of pop. (Top employing industry in Shafter) ²	Av wage ~\$ 40,000 ²	Expected investments		
Clean Energy (Incl. Advanced Manufacturing) ³		~200 estimated new jobs ⁴	Av wage ~\$45k ⁵	Expected investments		
Quality warehousing & transportation		15,000 estimated new jobs ⁶	Av wage ~\$58K - 35K ⁷	High expected investments		

Legend (Levels of evidence): Low Medium High

(1) Although it's not a standalone industry, we will examine entrepreneurship as a vital strategy for enhancing agriculture; (2) [US Census](#) (2022); (3) Although it's not a standalone industry, we will examine advanced manufacturing as a vital strategy for enhancing long term jobs and clustering; (4) The Wonderful Company (2024), Office of Planning & Research (2024); (5) IREC, National Solar Jobs Census (2023), Yale Climate Connections (2021); (6) [City of Shafter](#) (2024); (7) [Los Angeles Times](#) (2024); (2) US Census (2022)

Industry 1: Sustainable agriculture (including entrepreneurship)

Overview

As Shafter transitions to a greener economy, the sustainable agriculture industry has the potential to increase low wages and improve job quality and stability through the advent of technology-based, higher-skilled positions. As highlighted in the Regional Plan Part II, agriculture plays a crucial role in employing individuals from disinvested communities, particularly migrant farmworkers who often have limited educational qualifications and English proficiency. With only 0.6%⁴⁶ of agricultural workers indicating a need for an educational certificate, this industry offers job opportunities to those who might encounter substantial educational and credentialing obstacles in other fields.

To improve job quality in agriculture, Shafter can pursue agricultural innovation, which encompasses various technologies and practices aimed at improving efficiency, productivity,⁴⁷ and sustainability. These include advancements in technology, processing methods, and supply chain improvements (such as ag tech, value-added processing, and manufacturing). Such innovations can create higher-quality field-level roles like precision agriculture technicians, drone operators, and smart object technicians, moving away from traditional low-skilled jobs toward tech-driven, skilled positions. At the same time, the industry is beset with challenges. As discussed in Chapter 1, agricultural profit margins are declining, and water shortages are leading some farmers to sell their lands for solar energy projects. To improve crop yields and the overall competitiveness of the industry, innovative

⁴⁶ Source: Kern County - Regional Plan Part II

⁴⁷ Source: [Bundaberg Agtech Hub](#)

technological solutions are needed. This could have the effect of exposing a significant gap in technology and access to capital between small and medium-sized agribusinesses.⁴⁸

Regional assets

Shafter's geography and infrastructure provide advantages for the development of sustainable agriculture. Its favorable climate, fertile soil and established agricultural expertise have long contributed to the industry's growth. Additionally, the city's strategic location within the San Joaquin Valley—which produces a significant portion of California's agricultural output—and robust transportation infrastructure, including highways and railroads, support the efficient distribution of agricultural products to major markets. The city's essential infrastructure also includes fiber optic communications, which support logistics and data management and are crucial for implementing ag tech solutions effectively. Meanwhile, the Shafter Research Station, the leading R&D facility in the area, enables farmers to experiment with advanced technologies and improve crop yields.

Job quality and quantity

While agriculture remains one of the largest sources of employment in the city, the industry is struggling as it is decreasing in size and the quality of existing jobs is low. As mentioned in Chapter 1, 22% of the city's workforce is engaged in agriculture—following a 12.9-percentage-point drop from 2018 to 2022⁴⁹— though ~40%⁵⁰ of positions are seasonal or part-time, which can impact job stability, income, and access to benefits for workers in this industry. The industry's median wage of around \$40,000 in Shafter falls below the living wage in the Kern County region (~\$45,000)⁵¹ but exceeds the median wage for the city of Shafter (~\$31,000). This is aggravated by projections of a 25.5% drop in 2024 U.S. farm incomes.⁵²

Investing in agricultural innovation alongside value-added processing, R&D and manufacturing could increase the quality of jobs within the industry by creating longer-term and higher-paying jobs. For context, estimations suggest that ag tech jobs in the state offer average salaries around \$63,000 annually, 1.12 times more than non-tech jobs.⁵³

Market signals

Market signs point towards an industry in decline and in need of strategic innovation. Agricultural profit margins are shrinking, water access challenges are driving some farmers to sell their lands for solar energy projects, and the growing need for new, capital-intensive

⁴⁸ Source: Stakeholder interview 09/25/2024

⁴⁹ Source: [US Census](#)

⁵⁰ Source: Ibid.

⁵¹ Source: [MIT Living Wage Calculator](#)

⁵² Source: [USDA \(2024\)](#)

⁵³ Source: [Purdue University](#); Note: The range can vary significantly based on specific roles and geographic locations

technologies to improve crop yields may be contributing to a widening gap between small and medium agribusinesses.

As a result, several factors are driving increased investment into ag tech and sustainable farming practices that could facilitate innovation and growth in this space. In recent years, there has been a push for sustainable use of agricultural land in local policies in Shafter and throughout California and in the San Joaquin Valley, along with increasing investments in ag tech and value-added processing. This follows a recognition of the need for strategic innovation in the agriculture industry. For example, the California Department of Food and Agriculture (CDFA) is actively defining and promoting regenerative agriculture practices throughout the state. Investment in regenerative ag tech has significant potential to increase crop yields and safeguard against climate risks.

Shafter is well-positioned to leverage the influx of investments in ag tech and agro-processing in the surrounding area. For example, substantial public and private investments (~\$1.6 billion) from programs like FARMER, the Carl Moyer Program, and EIP have driven the adoption of advanced ag tech in the San Joaquin Valley since 2015. Additionally, the Kern Community College District (KCCD) established the California Renewable Energy Laboratory (CREL), a collaborative effort between public and private partners aimed at securing a stable energy future. One of its initial projects is an agrivoltaics initiative at the Regenerative Agriculture Education Center at Bakersfield College’s Delano Campus, which promotes regenerative farming practices. The ribbon-cutting for this project occurred in November 2023, and planning for both the installation and curriculum is currently in progress.

Community desirability

Agriculture is a traditionally important and desirable source of employment for Shafter residents, particularly for those in disinvested communities. Reflecting this, North Kern community members ranked agriculture as the highest priority industry in the subregion, according to surveys and interviews conducted during the Regional Plan Part II.⁵⁴ Community members advocate for increased support and resources for agricultural and farm workers, especially undocumented individuals, and highlight the need for more job opportunities to provide alternatives paths for displaced workers.⁵⁵

Alignment with equity, climate, and regional strategy

As outlined in the Regional Plan Part II, this industry strategy seeks to minimize the negative impacts of agriculture on the environment and public health by promoting mechanization and technological advancements. This approach aims to transition workers from fieldwork to higher-skilled, less hazardous jobs, reducing health risks and the environmental footprint of agricultural practices.

⁵⁴ Source: Community interviews administered directly to North Kern residents in June 2024, during research conducted for the Regional Plan Part II

⁵⁵ Source: Kern Coalition Stakeholder Meetings

The development of advanced ag tech aligns strongly with equity goals. By transitioning from traditional, labor-intensive farming methods to more mechanized and technology-driven processes, the agriculture industry can reduce the physical strain and health risks faced by farmworkers. While these advancements may displace some workers, many of whom come from disinvested communities, the strategy also creates pathways for entrepreneurship, offering displaced workers the chance to start their own businesses.

In Shafter's agricultural industry, significant gender equity disparities persist, shaped by economic trends and technological advancements. Over the past five years, women in Shafter have made modest gains in workforce participation, with a compound annual growth rate (CAGR) of 3%, bringing the average workforce participation rate for women to 25%. Despite this growth, women remain a minority in the agricultural workforce, with men occupying 75% of these roles. This disparity is further compounded by the gender pay gap in agriculture, which averages 50%, reflecting the broader systemic inequities that women in this industry face.⁵⁶

One major factor contributing to the gender gap is the shift toward more mechanized farming processes, particularly in high-value crops like pistachios and almonds. Large-scale agribusinesses in the region have transitioned from grapes to nut production, where mechanization is prevalent, often excluding women, who previously played significant roles in more labor-intensive farming practices. These technological changes have displaced many women from their traditional roles, making it harder for them to participate in the more advanced, mechanized agricultural processes.⁵⁷

Agriculture as a priority industry in Shafter aligns with North Kern's economic development strategy, where it was categorized as one of the two highly relevant industries for the subregion. Additionally, the needs and interests expressed directly by disinvested communities inform the selection of agriculture as a target industry strategy.

Conclusion

Agriculture has long been a vital source of employment for Shafter residents, especially in disinvested communities. As climate change increases the risk of displacement for agricultural workers, it is increasingly crucial for the region to explore alternative job opportunities for those at risk. With this in mind, Shafter can benefit from California's focus on regenerative agriculture as a framework for developing local policies that promote sustainable farming practices.

⁵⁶ Source: [US Census Bureau](#)

⁵⁷ Source: Stakeholder interview September 19, 2024

Industry 2: Clean energy (solar and energy storage)

Overview

Over the past 15 years, the Kern County region has become a center of clean energy in California. The region currently boasts over 20,000 megawatts of wind, solar, and energy storage capacity.⁵⁸ In Kern County's clean energy industry, solar energy is expanding rapidly, representing over a third of the clean energy workforce.

In Shafter, clean energy development has been focused on solar energy, although compared to other cities in the county, the industry is still emerging. The Shafter Solar PV Park has been operational since May 2015, and there are indications that other projects are in the pipeline, but there is ample room for growth. Wind and hydro energy projects have not been established in Shafter, mostly due to lack of favorable terrain features.

Regional assets

With its natural resources and existing warehousing activity Shafter is well-positioned to attract additional investments in solar energy and energy storage. While Shafter's abundant sunlight and flat terrain make it ideal for solar development, its geography is not well suited for development of wind or hydro power. The city lacks suitable water sources and does not experience strong, consistent wind speeds like areas such as California City (with average wind speeds of 8-10 mph in Shafter⁵⁹ versus 10-20 mph in California City⁶⁰). Solar energy development, however, not only benefits from the well-suited terrain, but also from projected increased demand given the massive expansion of warehousing and the pressures faced by transportation and warehousing companies to transition to electric vehicles and cleaner energy sources for their physical plants.

Job quality and quantity

As outlined in the Regional Plan Part II, clean energy jobs are generally high-quality, offering competitive pay, benefits, stability, and opportunities for worker participation. Research has identified a higher proportion of quality jobs in energy efficiency and renewable energy generation compared to the overall labor market. Observed wages in the industry are high—related industries such as utilities and construction, which support solar projects, pay median wages of \$101,000 and \$58,000, respectively. These are well above the living wage for Kern County (~\$45,000) and median earnings for Shafter workers (~\$31,000). Notably, only 39% and 37% of positions in renewable energy generation and green construction, respectively, require a four-year degree.

⁵⁸ Source: [Kern County Finds Economic Opportunities Beyond Oil and Gas Production in a "Carbon Management Business Park" | Department of Energy \(2024\)](#)

⁵⁹ Source: [Windfinder - Shafter](#)

⁶⁰ Source: [Windfinder – California City](#)

One commonly cited shortcoming is that the clean energy industry has higher potential for short-term rather than long-term job creation, with only about 8% of jobs expected to remain in operations and maintenance.⁶¹ With a single medium-size solar energy installation of 10MW having the potential to create roughly 20–250 jobs depending on market segment, but only 1.6–20 of those jobs would be long-term.⁶² Locally, clean energy is expected to create a medium number of jobs during peak construction—for example, the Wonderful Company’s 82MW solar expansion is expected to create ~198 construction jobs⁶³ and the North Kern Water Storage District Solar Facility’s 5MW expansion is expected to create ~12 jobs.⁶⁴

Market signals

Large-scale investments in clean energy are on the horizon in the Kern County region, including several projects that will benefit Shafter. These include the Wonderful Company’s 82 MW solar expansion,⁶⁵ the 0.7 MW Shafter-Wasco Irrigation District Solar Project,⁶⁶ and the 1.08 MW rooftop solar array at Performance Food Group.⁶⁷ In addition, the establishment of several renewable energy facilities—including NextEra Energy, Clean Energy Systems Inc., and Clean Energy Systems Kimberlina—indicate that Shafter is positioning itself as an emerging player in the Kern County region's transition to renewable energy, leveraging its geographical advantages and existing infrastructure to attract further investments and enhance local energy resilience. WIP’s public commitment to sustainability represents another strong market signal for the development of clean energy solutions, particularly in transportation. Tenants at WIP are committed to achieving net-zero carbon emissions. The park's initiatives, such as the Central Valley Green Pass, aim to reduce pollution and congestion while enhancing transport efficiency.

From a policy perspective, Shafter, like the broader Kern County region, benefits from clean energy-supportive policies outlined in the Regional Plan Part II. These include the Green Jobs Initiative, federal legislation such as the 2021 Infrastructure Investment and Jobs Act, and the 2022 Inflation Reduction Act. These could present critical opportunities to bring more sustainable and higher-wage jobs into the county and attract additional investment to Shafter.

Community desirability

North Kern residents expressed a generally positive outlook on the solar energy industry, ranking it as the second-highest priority during surveys and interviews conducted during

⁶¹ Source: [Interstate Renewable Energy Council](#) (2024)

⁶² Source: [Freeing Energy](#)

⁶³ Source: [The Wonderful Company](#) (2024)

⁶⁴ Source: [Office of Planning & Research](#) (2024)

⁶⁵ Source: [The Wonderful Company](#) (2024)

⁶⁶ Source: [Office of Planning & Research](#) (2024)

⁶⁷ Source: [Enerlogics](#) (2024)

the Regional Plan Part II planning process.⁶⁸ Stakeholder interviews revealed that younger residents in particular are eager to pursue careers in clean energy, seeing it as a path toward more stable and higher-paying jobs compared to agriculture. However, there are concerns about accessibility, as many potential workers, especially those from disadvantaged communities, struggle to access necessary training. While the industry presents exciting opportunities, the lack of accessible workforce development could limit the community's ability to fully benefit from its growth.

Alignment with equity, climate, and regional strategy

The development of clean energy aligns well with equity goals. Clean energy technologies can help significantly decrease air pollution, which has substantial public health benefits, particularly for disinvested communities that often bear the brunt of pollution and have limited access to healthcare. The adoption of frontier clean energy technologies (e.g., advanced energy storage solutions, smart grid technology, and next-generation solar and wind technologies) can also potentially help reduce energy prices, which would benefit communities for whom energy costs are most burdensome.

The clean energy industry also faces notable gender equity disparities. Women in this industry earn nearly 20% less than their male counterparts, reflecting a significant wage gap.⁶⁹ In the solar photovoltaic industry specifically, women hold 40% of full-time positions⁷⁰, but only hold 14% of senior management positions globally.⁷¹ Their participation in science, technology, engineering, and mathematics (STEM) roles within the renewable energy industry is also considerably lower than in administrative positions.⁷² These trends underscore the urgent need for targeted initiatives aimed at promoting equity and representation, ultimately fostering a more inclusive energy industry that can effectively harness the diverse talents of its workforce.

As outlined in the Regional Plan Part II, the clean energy industry aligns strongly with climate goals. Coal, oil, and gas are the largest contributors to global climate change by a large margin, accounting for over 75% of global greenhouse gas emissions and nearly 90% of all carbon dioxide emissions. By building up its clean energy industry, Shafter will be addressing the urgent need for climate action by supporting the transition away from fossil fuels.

Lastly, clean energy as a priority industry also aligns with North Kern's economic development strategy. In the Regional Plan Part II, clean energy was categorized as one of three highly relevant industries for the subregion.

⁶⁸ Source: Community interviews administered directly to North Kern residents in June 2024, during research conducted for the Regional Plan Part II

⁶⁹ Source: [S&P Global](#) (2024)

⁷⁰ Source: [International Renewable Energy Association](#)

⁷¹ Source: [World Bank](#) (2022)

⁷² Source: International Renewable Energy Association, [Renewable Energy: A Gender Perspective](#) (2019)

Conclusion

In conclusion, Shafter is poised to become a key player in the Kern County region’s rapidly growing solar energy industry, with its abundant sunlight, flat terrain, and potential for high-quality job creation. Upcoming investments and regional growth trends position the city to attract new industry players and expand its economic footprint. With competitive wages and accessible jobs, the industry can provide substantial benefits to the local workforce which also further regional equity and climate goals.

Industry 3: Quality warehousing and transportation

Overview

Shafter is well-positioned for growth in the warehousing and transportation industry, matching trends in surrounding areas. While the industry has been experiencing high growth in the region and is anticipated to continue to experience significant employment growth through 2030, Shafter’s workforce has yet to fully benefit from it. In Shafter specifically, transportation and warehousing employs only 5% of the labor force, a number which has been growing at an average 7% over the past five years,⁷³ compared to nearby cities like Bakersfield in which employment in the industry grew at an average 13% over the same period.⁷⁴

Regional assets

Shafter’s land resources, access to major transportation routes, proximity to existing logistics hubs, and growing warehousing infrastructure position the city for success in the transportation and warehousing industry. Warehousing businesses in Shafter can benefit from available land to build facilities, as well as class-one railroads that facilitate efficient shipping and receiving. The city’s proximity to major highways and the Port of Los Angeles can enhance the logistics capabilities of local manufacturers. Shafter’s location within 300 miles of 14% of the U.S. population further strengthens its role as a regional logistics hub. Furthermore, the city benefits from being home to the Wonderful Industrial Park (WIP) and proximity to the nearby Rudnick Warehouse Complex, two significant logistics hubs that position Shafter for further expansion in this growing industry.

Job quality and quantity

The transportation and warehousing industry has high potential for both short-term and long-term job creation. Currently, 5% of the local workforce is employed in this industry, making it the eighth-largest employer in the city. Median wages are low at around \$35,000, and while this is below the living wage for a single adult in Kern County (~\$45,000), it is above the median earnings for Shafter workers (~\$31,000). However, within one of the largest warehousing and transportation employers in the area, Wonderful Industrial Park (WIP), tenants such as Walmart offer high average salaries of \$58,000–\$60,000—almost

⁷³ Source: [US Census Bureau](#)

⁷⁴ Source: [US Census Bureau](#)

1.72 times higher than Shafter’s median salary for transportation and warehousing. The number of jobs provided by WIP is projected to increase to ~15,000 by 2035. Additionally, in Buttonwillow (18.5 miles from Shafter), the Rudnick Warehouse Complex is set to create up to 2,000 permanent jobs. More broadly, the South-Central Valley, which includes Shafter, is projected to experience a 22.1% growth in its warehouse and distribution labor force over the next decade.⁷⁵

Market signals

The transportation and warehousing industry is poised for growth given sizable recent investments in transportation infrastructure, warehouse expansion, and skills training. A new six-lane highway and a \$120 million inland rail terminal and container depot (to be completed Spring 2025) are coming to the area. The terminal is expected to streamline logistics operations by providing direct connectivity to major rail networks, thereby reducing costs and improving efficiency for tenants at the WIP. Once built, an estimated 20% of imported containers could arrive by rail, with each train replacing the equivalent of 240 trucks. Near Shafter, in Buttonwillow, the Rudnick Warehouse Complex is set to transform farmland into a 4-million-square-foot warehouse complex,⁷⁶ while a 73,000-square-foot warehouse under construction at Bakersfield’s Meadows Field Airport will soon join the 2.6-million-square-foot Amazon Fulfillment Center that opened there in 2020.⁷⁷ WIP’s 1,800-acre expansion represents another economic development opportunity for Shafter.

Investments in training also signal the potential for growth in transporting and warehousing in Shafter. The Wonderful Company has invested \$25 million in the Wonderful Career Center, which is designed to prepare local residents for skilled roles within the industrial park. This focus on training suggests that jobs created may require higher-than-basic skills, which typically correlate with higher wages. The company is also partnering with Bakersfield College to create and lead in-depth technical training programs. Training classes are available to WIP tenants and open to all Central Valley residents for free.

Community desirability

North Kern residents shared mixed views on the region’s transportation and warehousing industry. According to surveys and interviews conducted during the Regional Plan Part II, residents ranked it among the lowest-priority industries, largely associating it with low-paying, poor-quality jobs due to past experiences with unplanned growth.⁷⁸ Many also say that the opportunity for steady, relatively well-paying work in areas other than agriculture would come as a welcome addition. However, some residents are concerned that doubling down on an industry that brings more truck and train travel to one of the nation’s most

⁷⁵ Source: [CBRE](#) (2023)

⁷⁶ Source: [LA Times](#) (2023)

⁷⁷ Source: [LA Times](#) (2023)

⁷⁸ Source: Community interviews administered directly to North Kern residents in June 2024, during research conducted for the Regional Plan Part II

polluted corridors will inevitably have negative environmental consequences. If developing these industries, addressing these concerns by growth planning and implementing sustainable practices should remain a top priority.

Alignment with equity, climate, and regional strategy

The quality warehousing and transportation industry has potential to align with equity and climate goals and is well-aligned with regional strategy. More specifically, the industry needs a clear strategy to improve on its track record of poor labor conditions and worker safety issues, while offering more high-quality, accessible jobs with opportunities for advancement. It also needs to address the harmful health impacts of air pollution, which disproportionately affects minority and low-income communities, where warehouses are often located. As discussed in the Regional Plan Part II, the transportation industry accounts for half of California's GHG emissions.

The warehousing and transportation industry in Shafter also faces significant gender disparities, despite notable progress in women's workforce participation. Over the past four years, women's workforce participation has grown at a compound annual growth rate (CAGR) of 15%, bringing the average participation rate to 30% during this period. In contrast, men's participation has declined, with a negative 5% CAGR over the same four-year period, though their average participation rate remains higher at 70%. The industry also continues to exhibit a 20% gender pay gap.⁷⁹ The gender disparity in Shafter's warehousing and transportation industry is rooted in historical underrepresentation and industry stereotypes that have long portrayed these roles as unsuitable for women due to their physically demanding nature. Despite technological advancements that are reducing the physical demands of many roles, this shift is not enough to close the gender gap unless women, particularly from underrepresented groups, are trained and reskilled to take advantage of new job opportunities created by automation and technological innovation.⁸⁰

Lastly, quality warehousing and transportation as a priority industry also aligns with North Kern's economic development strategy. In the Regional Plan Part II, warehousing and transportation was categorized as one of the highest-priority relevant industries for the subregion.⁸¹

Conclusion

The transportation and warehousing industry is expanding rapidly throughout the region, and Shafter is well positioned to play a greater role. The new rail terminal and the WIP expansion signal that more growth in this industry is coming to North Kern. A significant number of jobs are expected to be created over the next decade that are accessible to people with low education levels; major investments in training programs will hopefully

⁷⁹ Source: [US Census Bureau](#)

⁸⁰ Source: [My Logistics Magazine](#) (2023)

⁸¹ Source: Community interviews administered directly to North Kern residents in June 2024, during research conducted for the Regional Plan Part II

provide more advanced skills and higher-quality job opportunities for the community, as well. However, while the industry is transitioning to clean energy solutions and low-emissions transportation, it can do more to reduce its climate impact and improve its safety and public health track record. By leveraging the advantages of its access to major transportation routes, as well as its available land, Shafter has the potential to create 15,000 new high-quality jobs, contributing more than 100% of jobs needed for the city's economic development.



Chapter 3: Industry Strategies

This chapter presents strategies aimed at enhancing economic mobility in Shafter across the prioritized industries identified in Chapter 2. It outlines a vision for the future of each prioritized industry, accompanied by supporting strategies and economic development objectives. These objectives aim to drive growth, promote job quality, leverage locality-specific assets, and align with the broader regional strategies as outlined in the Regional Plan Part II.

Strategies are organized and tagged by a series of development approaches, using the terms defined below:

- **Expand:** Refers to increasing the number of jobs provided by existing companies.
- **Upgrade:** Focuses on attracting new businesses within already established industries.
- **Adapt:** Involves adjusting current industries to meet future needs.
- **Initiate:** Pertains to drawing in new companies from industries not currently represented in the region.
- **Access:** Emphasizes improving access to existing job opportunities.

The following chapter outlines industry-specific strategies for Shafter for the (i) sustainable agriculture industry, (ii) clean energy industry, and (iii) quality warehousing industry.

Industry strategies

Industry 1: Sustainable agriculture (including entrepreneurship)

This sustainable agriculture strategy aims to transform Shafter's current agriculture industry into a modern, innovation-driven industry. By implementing current industry trends, developing manufacturing capacities, transitioning the robust workforce to higher-skilled jobs, and fostering entrepreneurship as an alternative path to displaced workers, Shafter can become a regional leader in sustainable agriculture. This vision can be realized through the following key objectives and supporting strategies:

1. Adapt: Support existing employers in adopting ag tech, regenerative practices, and value-added processing, with the goal of increasing the number of long-term high-quality jobs.

1a. Provide financial incentives for agribusinesses to implement new ag tech, adopt value-added processing, and hire locally. This can be achieved through targeted financial incentives for both large- and small-scale local agribusinesses, including tax credits, rebates, or reduced property taxes. To qualify, businesses would need to commit to transformative projects that enhance productivity through technological innovation or shift towards more sustainable and profitable practices. These incentives can additionally support the hiring of disadvantaged communities within Shafter. The program could establish clear guidelines to ensure that employers actively recruit, train, and retain a percentage of employees from underrepresented or economically disadvantaged groups, with tracking and reporting mechanisms in place to monitor compliance and assess impact on local employment.

1b. Develop a value-added processing business incubator. This incubator would be designed to support medium- and small-scale local agribusinesses in transitioning from primary production to advanced value-added processing techniques. This incubator would provide hands-on, expert-led assistance, technical guidance, and access to industry mentors. It would also provide practical support for adopting more complex agricultural processes such as food preservation, packaging, and product innovation. The program would focus on helping businesses refine their products, enhance marketability, and navigate the regulatory requirements necessary for scaling operations.

1c. Strengthen R&D capacity for agricultural innovation. Create an environment conducive to agricultural innovation by partnering with agribusinesses, universities, and research institutions to pilot new practices and technologies. For example, Shafter could leverage the expertise of existing organizations like the Shafter Research Station, which specializes in crop experimentation, to expand its focus to include piloting regenerative agriculture techniques that restore soil health. Additionally, investment could be directed towards crop genetics R&D, specifically researching drought and pest-resistant

strains to replace crops potentially impacted by higher temperatures and reduced water availability in Shafter. This strategy emphasizes hands-on research and development that directly benefits Shafter's agricultural community by enhancing climate resilience, improving worker safety, and promoting sustainable business growth. Key actions include securing public and private funding for research and experimentation, as well as creating a pipeline for pilot programs that can rapidly scale based on early successes, serving as proof-of-concept for broader adoption of innovative practices.

1d. Promote certification of sustainable and regenerative agriculture practices.

Collaborate with agribusinesses, industry bodies, and government agencies to establish certification programs that recognize agricultural operations adhering to sustainable and regenerative practices. Develop certification criteria focused on key areas such as regenerative agriculture techniques (e.g., soil health restoration, crop rotation, reduced pesticide use), water conservation, and biodiversity enhancement. These certified practices should add value to products by appealing to environmentally conscious consumers and markets. Partner with third-party auditors to ensure accountability and transparency throughout the certification process. Provide incentives such as tax breaks, access to premium markets, and public recognition to agribusinesses that achieve certification, positioning their products as high-value, sustainably produced goods that enhance the brand and profitability of Shafter's agricultural industry.

2. Initiate: Position Shafter as a preferred destination for ag tech manufacturers by removing barriers, incentivizing investment, and streamlining regulation. A greater ag tech manufacturing industry presence in Shafter can increase the number of long-term high-quality jobs decoupled from crop seasonality.

2a. Reduce entry barriers for ag tech manufacturers. Identify the specific challenges that ag tech and value-added manufacturers face when trying to establish operations in Shafter. Engage with stakeholders to identify logistical, regulatory, and financial barriers. Once these barriers are understood, develop targeted incentive programs, such as tax abatements, grants, and zoning flexibility, to attract manufacturers to the city. Ensure that incentives are tied to specific conditions, such as the creation of high-quality, long-term jobs that are decoupled from crop seasonality. Streamline regulatory processes by implementing expedited permitting to reduce the time and complexity of establishing manufacturing facilities. To promote inclusivity, establish job creation targets for disadvantaged communities within Shafter. Set up tracking and compliance systems to monitor progress, ensuring that manufacturers meet their employment commitments, and regularly assess the program's economic and social impact on Shafter's local economy.

3. Access: Transition workers to higher-skilled jobs in the sustainable agriculture industry.

This objective emphasizes value addition for existing agribusinesses and explores opportunities for agro-processing in manufacturing investments distinct from primary

production, requiring both additional investment and worker upskilling. By helping workers move into higher-skilled roles, Shafter can prepare its workforce for stable, high-quality positions in sustainable agriculture while enhancing its competitiveness in the evolving agricultural landscape.

3a. Increase awareness of existing and emerging skilled jobs. Conduct targeted outreach to ensure that disadvantaged residents in Shafter are informed about ag tech and value-added processing job opportunities. Collaborate with community-based organizations and trusted local institutions to implement campaigns in English, Spanish, and indigenous languages, utilizing local radio, social media, and community events. Emphasize addressing barriers faced by women and underserved groups, ensuring that information on upskilling, training, and job placement reaches the appropriate audiences.

3b. Train employees for roles involving technology. Encourage cross-training in various agricultural practices and technologies to build a versatile workforce capable of adapting to different roles. This includes training programs focused on skills needed for specific roles such as value-added processing (e.g., product packaging) and advanced manufacturing for ag tech components. It is important to ensure equitable access to these programs by offering relevant English-language development training, and by offering technical training at convenient times and locations. This includes flexible class schedules, childcare support, and targeted outreach to women and underserved groups in the community. These initiatives will equip Shafter's workforce with the skills needed to succeed in emerging agricultural industries, effectively addressing gender disparities and barriers to higher-quality employment.

3c. Work with employers to provide financial incentives for upskilling and retraining workers. These incentives could include paid training, one-time cash bonuses, wage increases linked to certification completion, or job guarantees upon certification. Additionally, consider offering tax incentives to businesses that implement these programs that would only be granted if companies meet specific key performance indicators (KPIs) linked to quality jobs. By partnering with employers to implement these initiatives, Shafter can ensure that businesses actively invest in their workforce.

4. Access to alternative pathways: Transition former agriculture workers into entrepreneurship. As technological advancements reshape the agricultural value chain, disadvantaged workers, particularly undocumented migrants, may face job displacement. This objective seeks to create entrepreneurial opportunities for these workers that promote economic resilience and active participation.

4a. Develop a specialized entrepreneurship incubator with financial and legal support for disadvantaged communities. This program would incentivize workers, especially former agricultural workers, to launch and scale their own businesses. Financial vehicles

such as grants, low-interest loans, and flexible payment options would help former agricultural workers, particularly undocumented migrants, start small businesses in various industries. Grants could cover essential startup costs, such as equipment, inventory, and marketing, while offering low-interest loans and flexible repayment options to further support business growth. Comprehensive mentorship would be offered, covering business planning, legal guidance, market access, and financial management, while specifically addressing the unique challenges faced by undocumented individuals transitioning into entrepreneurship. Pro-bono legal services would assist participants in navigating regulatory hurdles, including business registration, tax compliance, and labor laws. By providing culturally sensitive resources and technical assistance, the incubator would empower participants to establish and grow legitimate businesses, ultimately promoting economic inclusion. Programs would be available in English, Spanish, and indigenous languages, with flexible schedules to accommodate family and work commitments. To ensure inclusivity, programs would offer support for transportation, childcare, and access to training venues in underserved communities. Special efforts **would** target women and other underrepresented groups, ensuring they have equitable access to entrepreneurship training.

4b. Ensure county-wide industry bodies support Shafter's Latino community. Leverage existing organizations, such as the Kern County Latino Chamber of Commerce, to ensure that industry bodies are effectively supporting Latino entrepreneurs in Shafter. This effort will focus on advocating for better business conditions, improving access to resources, and promoting equitable inclusion in larger supply chains. By collaborating with local, state, and federal entities, this initiative aims to address regulatory challenges and promote equitable business practices that align with the unique needs of Latino entrepreneurs, particularly in the agricultural industry. This approach ensures that existing support structures are tailored to Shafter's community without duplicating the services provided by incubators.

4c. Expand training and address barriers to participation. Broaden existing training programs to equip entrepreneurs with key business skills such as finance, accounting, and marketing, while also addressing common barriers to participation. These programs would be available in English, Spanish, and indigenous languages, with flexible schedules to accommodate family and work commitments. To ensure inclusivity, programs would offer support for transportation, childcare, and access to training venues in underserved communities. Special efforts would target women and other underrepresented groups, ensuring they have equitable access to entrepreneurship training.

Industry 2: Clean energy (solar and energy storage)

This clean energy strategy envisions Shafter as a leading hub for solar energy innovation, advanced manufacturing, and production, supported by a skilled workforce. The clean energy industry is still in an early phase in Shafter, and the proposed strategy is designed to

expand the region's current foothold in the solar power industry and position its competitive advantages for future energy storage. By developing the necessary infrastructure for growth, Shafter can foster a robust manufacturing ecosystem that produces, maintains, and enhances clean energy technologies, generating long-term high-quality employment for current residents of Shafter and the surrounding region. This vision will be realized through the following key objectives and supporting strategies:

1. Expand: Increase the number of long-term, high-quality jobs generated by proposed solar energy and storage projects. This objective aims to address key barriers to expansion faced by existing solar energy and energy storage companies in Shafter, while diversifying their revenue streams through clean energy export.

1a. Create a public-private-community partnership to assess and address specific barriers to the inclusive development of solar energy in Shafter. Focus the partnership's mandate on infrastructure, workforce readiness, and equitable access to opportunities. Conduct a comprehensive, evidence-based assessment to pinpoint potential challenges such as permitting issues, gaps in workforce skills, and community concerns about environmental impacts. Based on these findings, the partnership should design a growth strategy that includes clear roles for public, private, and community actors, with measurable goals. Implement and monitor the plan, ensuring investments align with Shafter's economic and social objectives, with a particular focus on community inclusion and job creation.

1b. Upgrade local energy infrastructure for clean energy export. Diagnose and address existing gaps in the electrical grid, particularly its capacity to handle increased clean energy output. This includes building new transmission lines and substations specifically designed to transport excess clean energy to other regions. Additionally, invest in large-scale electricity storage systems to store surplus energy during peak production and release it when demand surges, ensuring a stable supply and enhancing grid reliability. Implement advanced grid management systems to optimize energy distribution, integrate diverse energy sources, and enable seamless export. Collaborate with regional utilities and state authorities to secure energy export contracts, creating a revenue stream for Shafter's clean energy companies and reinforcing the city's position in the broader energy market.

1c. Establish long-term job retention initiatives: Partner with employers, workforce agencies, and community organizations to help solar project construction workers transition into permanent roles after project completion. This can include wage subsidies and incentives to companies that retain workers in operations, maintenance, or facility expansion roles, as well as requirements for employers benefiting from city incentives to prioritize internal recruitment from their construction workforce for long-term positions. Additional strategies can include systems like a regional pool of qualified

employees that allows workers to shift between public and private projects, ensuring continued employment.

2. Initiate: Develop clean energy advanced manufacturing for solar and wind components, supporting the creation of long-term quality jobs within the industry. Shafter has the regional assets to become a hub for clean energy manufacturing and research, contributing to the broader clean energy ecosystem in the Kern County region. By focusing on advanced manufacturing for solar components and fostering R&D, Shafter can attract clean energy investments and create high-paying, skilled jobs.

2a. Reduce entry barriers for clean energy manufacturers. Begin by diagnosing and prioritizing the specific challenges that clean energy manufacturers face when trying to establish operations in Shafter. Engage with stakeholders to identify logistical, regulatory, and financial barriers, particularly those related to infrastructure needs such as grid capacity and energy distribution. Once these challenges are understood, develop targeted incentive programs, including tax abatements, grants, and zoning flexibility, to make Shafter a more attractive location for clean energy manufacturers. Additionally, streamline regulatory processes through expedited permitting, reducing the time and complexity involved in setting up manufacturing facilities. Ensure that incentives are tied to specific outcomes, such as the creation of high-quality, long-term jobs. To promote inclusivity, set employment targets that prioritize disadvantaged communities in Shafter. Establish tracking and compliance mechanisms to monitor these commitments and assess the program's impact on both economic growth and social equity.

2b. Strengthen R&D capacity to incentivize localized design, production, testing and installation of equipment. Facilitate partnerships between state-level and county-level governments, the private sector, and research institutions to advance clean energy R&D in Shafter. This strategy aims to create an environment conducive to innovation by identifying opportunities for pilot projects, testing new clean energy technologies, and localizing the design and production of key components such as energy storage systems and solar panel technology. The city should also explore opportunities for collaboration with universities, government labs, and industry leaders to attract additional resources and expertise. Building a strong R&D ecosystem will encourage localized manufacturing, contribute to workforce upskilling, and position Shafter as a leader in clean energy innovation.

3. Access: Leverage existing workforce capabilities to enhance access to clean energy jobs. Given Shafter's predominantly Latino population, many residents face obstacles such as language barriers, limited access to specialized training, and lack of awareness of job opportunities. By developing inclusive, accessible training programs, promoting career advancement opportunities, and offering financial incentives for upskilling, Shafter can ensure its workforce is prepared for the growing demand in clean energy jobs and create a more inclusive and resilient local economy.

3a. Upskill local workforce in solar installation, maintenance, and related technical roles. Partner with clean energy employers to design inclusive training programs that upskill the workforce for key technical roles, such as solar panel installation, maintenance of solar facilities, electrical systems, and the operation of energy storage systems. Given the specialized nature of this field, explore the potential for partnerships with advanced training institutions like the Center for Advanced Tech. Programs should be tailored to meet the needs of Shafter’s predominantly Latino population, offering classes in English, Spanish, and Indigenous languages to ensure language is not a barrier. The programs should be designed to provide flexible scheduling to accommodate working families, ensuring greater accessibility for all workers, particularly women and underserved communities. Additionally, companies should be encouraged to offer practical, hands-on training directly linked to employment opportunities, ensuring participants transition seamlessly into these high-demand jobs.

3b. Provide financial incentives for upskilling and retraining: Collaborate with solar energy employers to develop financial incentive programs that encourage Shafter’s disadvantaged workers to pursue upskilling opportunities. These incentives could include paid training programs, bonuses tied to certification completion (such as certifications for solar energy maintenance or electrical system installation), or wage increases upon gaining technical qualifications. Additionally, offer job guarantees in areas like solar panel manufacturing, energy storage system maintenance, and clean energy infrastructure development upon successful completion of relevant training.

3d. Offer career advancement opportunities: Work with project developers to implement career development programs that offer clear pathways for advancement within the clean energy industry. This could include mentorship programs, professional development workshops, and opportunities for further education that are administered in tandem, or as an additional unit to, the upskilling training outlined in strategy 3a.

Industry 3: Quality warehousing and transportation

Shafter’s quality warehousing and transportation strategy aims to position the industry as the community’s main source of high-quality, accessible employment. This approach aims to create accessible, high-quality jobs, leveraging existing warehousing operations while also enhancing logistics capabilities and addressing community concerns about safety and environmental impacts. This vision can be realized through the following key objectives and supporting strategies:

1. Access: Ensure Shafter residents are directly connected to job opportunities from new and existing investments in warehousing and transportation. Research and interviews suggest that while nearby logistics hubs have available job training programs, Shafter

residents are still not accessing these high-quality jobs and placement opportunities (~5% of the workforce).⁸²

1a. Help community members navigate the landscape of available programs and job placement initiatives. This requires close partnerships and collaboration with community-based organizations, labor organizations, and educational institutions to engage with hard-to-reach and remote populations in Shafter (e.g., via promotoras / community navigators).

1b. Collaborate with employers to address common barriers to job training participation. Develop and expand programs to help Shafter's Latino and disadvantaged communities access available resources by offering classes in multiple languages, providing transportation support, offering flexible scheduling, and offering childcare services. Additionally, ensure that training opportunities are designed to be inclusive of vulnerable populations like undocumented migrants.

1c. Develop targeted recruitment efforts for disadvantaged communities: Collaborate with employers, CBOs, and local nonprofits to advise corporations on best practices for inclusive recruitment. Shafter should play an advisory role, guiding companies on how to structure their recruitment processes to ensure they reach underserved communities. This could include developing Spanish-language job portals, simplifying application processes, and offering facilitators who can assist applicants during recruitment. Additionally, implement a local hiring preference program that encourages employers to prioritize Shafter residents for entry-level and unskilled positions, with incentives for companies that hire locally. The government can also support outreach through CBOs, hosting workshops, and creating culturally relevant marketing materials to engage disadvantaged populations.

1d. Provide financial incentives to pursue training, retraining, or upskilling: Work with employers to improve or create incentives for workers to receive initial training, upskilling, or retraining and move into higher-quality positions (e.g., paid training, one-time cash bonus, wage increase with certification, etc.).

1e. Foster regional collaboration for workforce development: Collaborate with cities like Mojave, California City and Bakersfield to create shared workforce development programs that pool resources for training and education. This ensures Shafter's residents have access to specialized skills without requiring significant upfront investments in training infrastructure.

2. Adapt: Ensure current and future warehousing and transportation developments meet environmental and labor standards. Research and stakeholder feedback suggest concerns regarding both the environmental impact and labor conditions in the warehousing and

⁸² Sources: Stakeholder interview 9/19/2024; [US Census Bureau](#)

transportation industry, particularly around air quality and worker safety. Strategies supporting this objective aim to improve air quality through clean energy adoption, investment in the necessary infrastructure to support these technologies, and improvement in labor conditions to ensure safer, fairer working environments. This vision can be realized through the following key objectives and supporting strategies:

2a. Promote certification of ethical and sustainable practices. Collaborate with industry bodies and relevant government agencies to establish certification programs that recognize logistics hubs meeting high standards in worker safety, job quality, and sustainable operations. Develop clear certification criteria that emphasize best practices in labor conditions (e.g., fair wages, worker safety protocols), emissions reduction (e.g., use of clean energy), and energy efficiency (e.g., adoption of EV fleets and solar-powered warehouses). Partner with third-party auditors to ensure transparency and accountability in the certification process. Provide meaningful incentives such as tax breaks, preferential contracts, or public recognition to companies that exceed these standards, making certification an attractive goal for warehousing and transportation investors.

2b. Facilitate collaboration for improved labor standards in transportation and warehousing. Create spaces for collaboration between local and state labor organizations, CBOs, and employers to promote improved labor laws and standards in the transportation and warehousing industry. This includes facilitating discussions between stakeholders to ensure higher-quality jobs through the adoption of best practices for worker safety, fair compensation and job satisfaction.

2c. Support employers in adopting sustainable and low-emissions practices. Work with warehousing and transportation companies to help them adopt low-emissions technologies and innovations that improve operational efficiency and sustainability. Offer incentives such as tax breaks and financial subsidies to encourage the use of electric vehicles, energy-efficient warehouses, and clean energy systems, ensuring long-term environmental benefits while maintaining or improving productivity.

2d. Invest in infrastructure for industrial clean energy use in transportation and warehousing, in line with Shafter's broader clean energy strategies. Focus on ensuring reliable clean energy, making it easier for companies to adopt energy-efficient solutions by upgrading Shafter's electrical grid to handle increased clean energy loads. Invest in large-scale energy storage systems and advanced grid management to optimize distribution, supporting sustainable practices such as EV fleets and solar-powered warehouses for employers.

2e. Invest in workforce training and upskilling for roles involving industrial clean energy use. Partner with local institutions and employers to offer training programs

focused on clean energy roles within logistics, such as electric vehicle mechanics, clean energy systems technicians for warehouses, and energy-efficient facility management.

2f. Promote worker protections and awareness of labor standards. Establish a worker oversight board and implement a hotline that makes it easier for employees in the warehousing and transportation industry to report labor violations directly to the state labor commissioner. Promote awareness of existing labor laws, such as AB 701,⁸³ by partnering with community-based organizations to provide education campaigns and informational materials in multiple languages. These efforts will increase visibility and accessibility, empowering workers to report unsafe conditions, unfair wages, or excessive hours. This strategy focuses on ensuring that employees are fully informed of their rights and have straightforward channels for raising concerns.

3. Upgrade: Attract new investors to develop additional logistics hubs that prioritize high-quality jobs and sustainable practices. By expanding beyond the existing industrial park, Shafter can position itself as a leader in environmentally responsible logistics, driving regional economic growth while maintaining a strong commitment to the highest environmental and labor standards.

3a. Develop a long-term sustainable growth plan for new logistics hubs. Partner with urban planners, sustainability experts, and industry leaders to establish a forward-looking strategy that supports Shafter's long-term vision for sustainable logistics industry growth. This strategy should prioritize responsible site selection, adhering to the mandated setbacks from residential areas and sensitive sites as stated in AB 98.⁸⁴ Additionally, it should integrate clean energy, EV infrastructure, and efficient truck routes, while considering future land use, transportation connectivity, and workforce housing. By adopting a long-term approach to city planning, Shafter can ensure that new logistics hubs not only meet the current needs of the industry but also position the city for sustained economic and environmental growth.

3b. Attract businesses that align with Shafter's commitment to sustainability and job quality. Scout for a private sector partner who can champion Shafter's vision for sustainable, high-quality jobs in transportation and warehousing. Develop a targeted outreach initiative to engage transportation and logistics companies that prioritize sustainable operations, leveraging incentives such as tax credits, expedited permitting, and grants for businesses investing in clean energy infrastructure, low-emissions vehicles, and energy-efficient logistics. Focus on attracting a corporate partner that will

⁸³ Note: AB 701 is a California law that regulates labor standards in warehouse distribution centers.

⁸⁴ Note: AB 98 is a California law signed in September 2024 that requires new or expanded warehouses to be set back 300-500 feet from homes, schools, and hospitals. It also mandates energy efficiency, EV infrastructure, and restrictions on truck routes to reduce environmental impact and improve public health in affected areas. The bill aims to balance the growth of the logistics industry with community health and environmental standards.

not only align with Shafter’s environmental standards but also commit to workforce development by providing living wages, safe working conditions, and clear career advancement pathways.

Industry development enablers and strategies

To support the growth of its sustainable agriculture, clean energy, and quality warehousing and transportation industries, Shafter should consider several key enablers. These include the establishment of advanced manufacturing task forces, enhanced grid capacity, and prioritization of affordable housing. Specifically:

- 1. Establish advanced manufacturing task forces for the ag tech and clean energy industries.** Form specialized task forces focused on identifying the specific needs of ag tech producers and clean energy manufacturers in Shafter. The ag tech task force will focus on integrating advanced manufacturing capabilities for products like precision farming equipment, automated irrigation systems, and value-added processing machinery. The Clean Energy task force will target opportunities in solar panels, energy storage, and energy-efficient technologies. The primary mandate for both task forces will be to assess and overcome logistical, regulatory, and financial barriers, while scouting for private sector partners interested in establishing operations in Shafter. These partners should align with Shafter's sustainability and economic growth vision, and their commitment will play a critical role in transforming Shafter into a competitive manufacturing hub for both industries.
- 2. Invest in grid capacity to support net-zero goals and sustainable industrial growth.** As Shafter expands its clean energy sector, investing in grid capacity is critical to ensure reliable power for industrial operations. Renewable energy sources like solar are variable and intermittent, creating challenges for stable power supply.⁸⁵ To support Shafter's growth as a clean energy hub, the local grid must be equipped to handle these fluctuations while meeting the demands of industrial operations. Similarly, energy price hikes and reduced grid stability in the North Kern subregion threaten communities and key industries.⁸⁶ Upgrading grid capacity now will not only support immediate industrial needs but also position Shafter as a key player in California’s broader transition to a net-zero economy, attracting companies aligned with both sustainability and long-term economic growth.
- 3. Prioritize affordable housing with strong community services to attract and retain workers.** While the average rent in Shafter is currently \$783 per month⁸⁷—representing about 30% of the median annual earnings of \$30,898 for local workers⁸⁸—industry leaders have expressed concerns that housing affordability could become a long-term

⁸⁵ Source: [California Independent System Operator](#) (2024)

⁸⁶ Source: Kern County - Regional Plan Part II

⁸⁷ Source: [Apartments.com](#) (2024)

⁸⁸ Source: [US Census Bureau](#)

issue as the city continues to grow.⁸⁹ Shafter's expanding industries, particularly warehousing and transportation, are expected to increase housing demand. To ensure the city remains competitive in attracting and retaining a stable workforce, proactive steps to maintain affordable housing options and enhance community services—such as childcare, healthcare, and recreational facilities—will be key to encourage individuals and families to settle in the area. This approach not only supports workforce stability but also helps create a livable environment that sustains Shafter's economic growth.

⁸⁹ Source: Stakeholder interview 9/15/2024