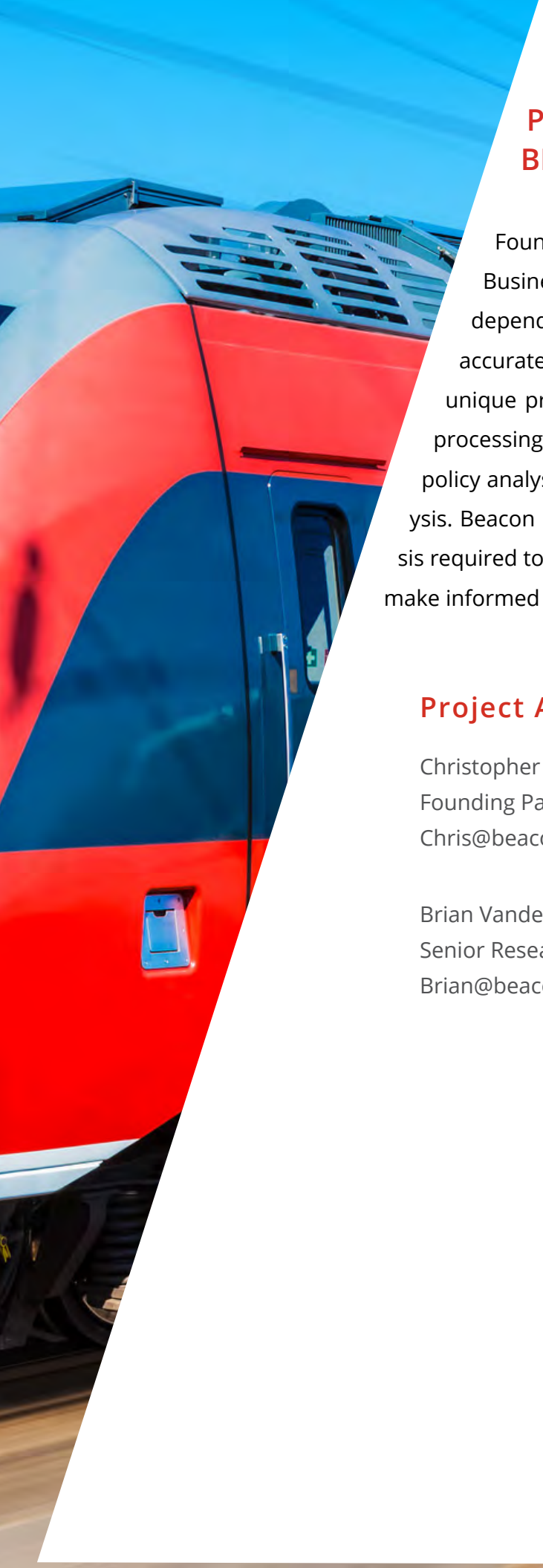
Economic Impact Analysis

VIRGIN TRAINS USA

February 1, 2019

Virgin Trains USA



Prepared by
BEACON ECONOMICS LLC

Founded in 2007, Beacon Economics, an LLC and certified Small Business Enterprise (SBE) with the state of California, is an independent research and consulting firm dedicated to delivering accurate, insightful, and objectived economic analysis. Leveraging unique proprietary models, vast databases, and sophisticated data processing, the company specializes in industry analysis, economic policy analysis, economic impact analysis, and real estate market analysis. Beacon Economics equips its clients with both the data and analysis required to understand the significance of on-the-ground realities and make informed business and policy decisions.

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EXECUTIVE SUMMARY

Anyone who has traveled from Southern California to Las Vegas on a busy weekend knows that traffic can be brutal. In particular, traffic on Interstate 15 between the Cajon Pass and Las Vegas can crawl on busy weekends. For example, the estimated travel time between Downtown Los Angeles and Las Vegas on a typical Friday at 3:00PM is estimated to be between five and seven hours. The return trip can also be long, with estimated travel time between Las Vegas and Downtown Los Angeles on a typical Sunday at 1:00PM estimated to be between four-and-a-half and six hours. Virgin Trains USA seeks to alleviate some of this gridlock by building a high-speed rail line (the Project), which would link Southern California and Las Vegas. This would not only provide relief for travelers on I-15 but would also support jobs in the region, both from construction and from on-going operations. Virgin Trains USA is the first new major private passenger intercity railroad in the United States in over a century, and currently operates a pas senger rail system between Miami and West Palm Beach. Construction is currently underway to expand the rail service to Orlando, which will carry an estimated 6.6 million passengers annually.

In September 2018, Virgin Trains USA announced its expansion to the west through the proposed ac quisition of DesertXpress Enterprises, LLC. With this acquisition, Virgin Trains USA agreed to acquire the rights to develop a high-speed rail project within a corridor between Victorville, California and Las Vegas, Nevada. In addition to construction of rail infrastructure, Virgin Trains USA will also build a vehicle main tenance facility that is approximately 200,000 square feet in Victorville. Once completed it is estimated the facility will employ 90 people annually, including management and support staff. The Vegas Expan sion will link one of the most traveled routes in the United States, connecting approximately 13.4 million people living in the Los Angeles metro area with the approximately 2.2 million people living in the Las Vegas metro area, which is one of the most visited cities in the United States.

Once completed, it is estimated the Vegas Expansion will result in trips between Victorville and Las Vegas taking approximately 1 hour 30 minutes compared to an estimate of approximately 2 hours 50 minutes by car. In addition, passengers can maximize productivity, use mobile devices freely, and enjoy a variety of amenities. Virgin Trains USA estimates that fares between Victorville and Las Vegas will average ap proximately $60, which is less expensive than the cost of driving (when including parking costs) and the typical cost of flying. For example, the cost of a next day, Friday flight from Los Angeles to Las Vegas can often exceed $150.

The Project offers significant benefits in terms of time and cost savings for individuals traveling between Southern California and Las Vegas. Due to their ability to offer travel that is faster, more productive, more convenient and more comfortable along densely traveled corridors, intercity railroads commonly capture a significant share of their relevant travel market, even at fare levels that are often higher than the cost of driving or flying. These markets represent travel destinations that are “too long to drive, too short to fly” for many travelers, making travel by rail the most effective, efficient and viable mode of transportation. Because of these benefits, an estimated fully operational annual stabilized ridership of 11.3 million pas sengers is anticipated for the Vegas Expansion by the fourth quarter of 2023 or the first quarter of 2024.

Virgin Trains USA intends for the Las Vegas station to be located adjacent to the Las Vegas strip and to serve as a major intermodal hub with access to taxis, buses, ride shares, shuttles and limousines. In con nection with the Vegas Expansion, Virgin Trains USA expects to develop commercial real estate to pursue new office, commercial, retail, entertainment, hotel and/or multi-family residential facilities in Las Vegas, having entered into an agreement to acquire approximately 38 acres of land adjacent to the Las Vegas strip for potential station location and real estate development.

Virgin Trains USA expects the initial Southern California station to be located in Victorville, and also in tends to add additional stations and provide connections to California Metrolink. The first phase of the Vegas Expansion is expected to be built on a right of way within and adjacent to Interstate 15, traversing 185 miles with no at-grade or pedestrian crossings. Construction is expected to begin in 2019 and initial service is expected to begin by the fourth quarter of 2021 or the first quarter of 2022.

In this report, Beacon Economics outlines the potential benefits of the construction and operations of the Southern California to Las Vegas Project, detailing its economic impact on San Bernardino County, Clark County, the State of California and the State of Nevada.

CONSTRUCTION IMPACT

Overall construction is estimated to cost $3.63 billion for the railroad and stations from 2019 to 2023, with the majority of the spending going to vendors in San Bernardino County and Clark County.

As these expenditures move through the economies of San Bernardino County, Clark County, California and Nevada, they would create a multiplier effect, generating additional economic activity beyond the expenditures directly related to the Project. Beacon estimates:

Economic Impact from Construction of Rail System
from 2019 to 2023

REGION	OUTPUT ($ MILLIONS)	EMPLOYMENT	LABOR INCOME ($ MILLIONS)
SAN BERNARDINO COUNTY	$2,130	15,871	$801
CLARK COUNTY	$1,982	13,656	$711
CALIFORNIA & NEVADA	$4,812	30,672	$1,826

Source: IMPLAN, Analysis by Beacon Economics
Note: Includes Direct, Indirect, and Induced Output, Employment, and Labor Income

In San Bernardino County, construction from 2019 to 2023 would support **$2.1 billion** in economic output, **15,871 jobs**, **$801 million** in labor income and **$274.6 million** in federal, state, and local tax revenue.

In Clark County, construction from 2019 to 2023 would support **$2.0 billion** in economic output, **13,656 jobs**, **$711 million** in la bor income and **$246.6 million** in federal, state, and local tax revenue.

In California and Nevada, con struction from 2019 to 2023 would support **$4.8 billion** in economic output, **30,672 jobs**, **$1.826 billion** in labor income and **$626.7 million** in federal, state, and local tax revenue.

OPERATIONS IMPACT

The Project would also support just over 540 jobs on an ongoing basis through the rail line's operations. As with construction, these jobs would create a multiplier effect, generating additional economic activity beyond those directly supported by the Project. Beacon estimates:

In San Bernardino County, operations would support **$46.9 million** in economic output, **404 jobs**, **$17.3 million** in labor income and **$4.8 million** in federal, state, and local tax revenue annually.

In Clark County, operations would support **$73.4 million** in economic output, **460 jobs**, **$22.5 million** in labor income and **$8.5 million** in federal, state, and local tax revenue annually.

In California and Nevada, operations would support **$140.4 million** in economic output, **937 jobs**, **$48.0 million** in labor income and **$16.2 million** in federal, state, and local tax revenue annually.

Economic Impact from Operations of Rail System Annually

REGION	OUTPUT ($ MILLIONS)	EMPLOYMENT	LABOR INCOME ($ MILLIONS)
SAN BERNARDINO COUNTY	$46.9	404	$17.3
CLARK COUNTY	$73.4	460	$22.5
CALIFORNIA & NEVADA	$140.4	937	$48.0

Source: IMPLAN, Analysis by Beacon Economics
Note: Includes Direct, Indirect, and Induced Output, Employment, and Labor Income

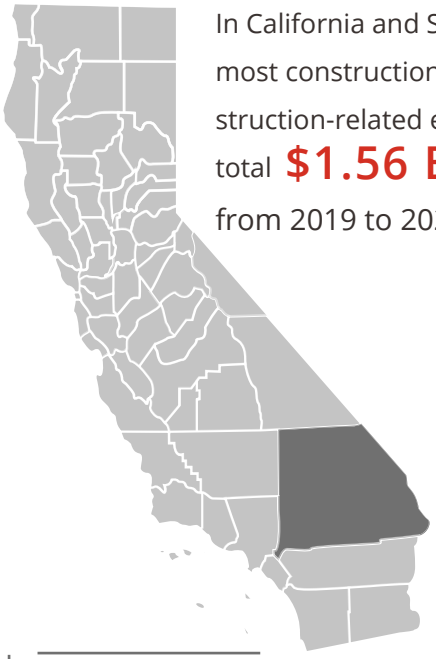
EXPENDITURES

CONSTRUCTION OF THE RAIL SYSTEM

Overall construction is estimated to cost

$3.63 BILLION

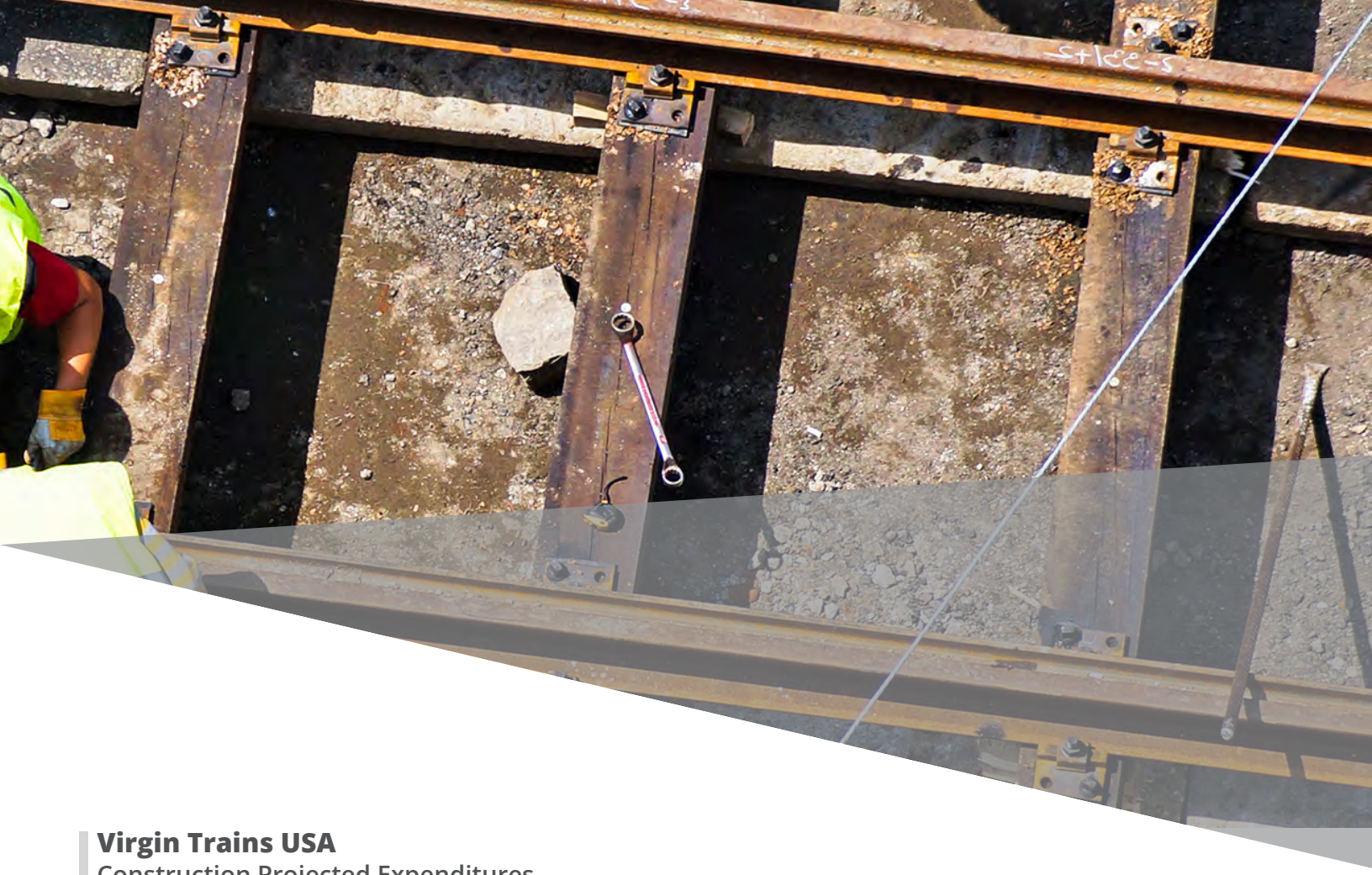
for the railroad and stations from 2019 to 2023, with the majority of spending ($2.83 billion) going to vendors in San Bernardino County and Clark County.[1] Most of these expenditures will be hard construction costs, which would help support thousands of jobs in the region. Construction-related expenditures include direct construction costs (labor and materials), developer/management fees, architects and engineer expenses, legal fees, insurance and marketing costs.



In California and San Bernardino County, where most construction would take place, direct construction-related expenditures are estimated to total **$1.56 BILLION** from 2019 to 2023

In Nevada and Clark County, direct construction-related expenditures are estimated to total **$1.27 BILLION**

[1]An estimated 30% of direct construction costs are expected to go to vendors outside San Bernardino County and Clark County.



Virgin Trains USA
Construction Projected Expenditures

CATEGORY	2019	2020	2021	2022	2023	TOTAL
DIRECT CONSTRUCTION COST	130	600	740	710	480	2,600
DEVELOPER/MANAGEMENT FEES	13	19	25	25	20	102
ARCHITECTS/ENGINEERING	45	34	10	7	6	102
LEGAL FEES	19	18	17	17	17	88
INSURANCE FEES	7	21	21	21	7	77
MARKETING FEES	7	7	7	7	7	35
OTHER CONSTRUCTION COSTS	74	102	142	142	105	565
TOTAL	**295**	**801**	**962**	**929**	**642**	**3,629**

Source: Virgin Trains USA, Analysis by Beacon Economics

ECONOMIC IMPACT

CONSTRUCTION OF THE RAIL SYSTEM

The construction of the Southern California to Las Vegas rail system would increase economic activity in the region. This would come not only from expenditures during construction, it would also be generated when the initial spending multiplies through the economies of San Bernardino County and Clark County.

Impact studies assume that any increase in spending has three effects. First, a direct effect on that industry itself results from the additional output of goods or services. Second, indirect effects are made on all the industries whose outputs are used by the industry under observation. These are the impacts generated by a business' supply chain. Third, induced effects arise when employment increases and household spending patterns expand. These impacts follow from the additional income earned in producing this output, both by employees in the target industry and by those supplying it. Using the IMPLAN modeling system, Beacon estimates the direct, indirect and induced economic impact of the construction of the Project.[2]

[2] See the Appendix for more details on the IMPLAN modeling system

SAN BERNARDINO COUNTY - ECONOMIC IMPACT

In San Bernardino County, construction activity from 2019 and 2023 would:

- Generate **$2.1 billion** in economic output, with **$1.5 billion** generated from direct spending, **$200 million** from indirect spending and **$400 million** from induced spending.
- Support **2,130 jobs**, with **1,501** supported through direct spending, **244** through indirect spending and **385** through induced spending.
- Generate **$801 million** in labor income, with **$592 million** generated from direct spending, **$83 million** from indirect spending and **$126 million** from induced spending.
- Generate **$274.6 million** in federal, state, and local tax revenue.

Construction Impact Study
2019 to 2023

IMPACT	OUTPUT ($ MILLIONS)	EMPLOYMENT	LABOR INCOME ($ MILLIONS)
DIRECT	$1,501	10,788	$592
INDIRECT	$244	1,922	$83
INDUCED	$385	3,161	$126
TOTAL	**$2,130**	**15,871**	**$801**

Source: IMPLAN, Analysis by Beacon Economics

CLARK COUNTY - ECONOMIC IMPACT

In Clark County, construction activity from 2019 and 2023 would:

- Generate $**2.0 billion** in economic output, with **$1.2 billio**n generated from direct spending, **$300 million** from indirect spending and **$500 million** from induced spending.
- Support **13,656 jobs**, with **8,537** supported through direct spending, **1,919** through indirect spending and **3,200** through induced spending.
- Generate **$711 million** in labor income, with **$473 million** generated from direct spending, **$99 million** from indirect spending and **$139 million** from induced spending.
- Generate **$246.6 million** federal, state, and local tax revenue.

Construction Impact Study
2019 to 2023

IMPACT	OUTPUT ($ MILLIONS)	EMPLOYMENT	LABOR INCOME ($ MILLIONS)
DIRECT	$1,220	8,537	$473
INDIRECT	$300	1,919	$99
INDUCED	$462	3,200	$139
TOTAL	**$1,982**	**13,656**	**$711**

Source: IMPLAN, Analysis by Beacon Economics

CALIFORNIA & NEVADA - ECONOMIC IMPACT

In California and Nevada, construction activity from 2019 and 2023 would:

- Generate **$4.8 billion** in economic output, with **$2.7 billion** generated from direct spending, **$900 million** from indirect spending, and **$1.2 billion** from induced spending.
- Support **30,672 jobs**, with **18,033** supported through direct spending, **4,814** through indirect spending and **7,825** through induced spending.
- Generate **$1.826 billion** in labor income, with **$1.133 billion** generated from direct spending, **$301 million** from indirect spending and **$391 million** from induced spending.
- Generate **$626.7 million** in federal, state, and local tax revenue.

Construction Impact Study
2019 to 2023

IMPACT	OUTPUT ($ MILLIONS)	EMPLOYMENT	LABOR INCOME ($ MILLIONS)
DIRECT	$2,721	18,033	$1,133
INDIRECT	$887	4,814	$301
INDUCED	$1,204	7,825	$391
TOTAL	**$4,812**	**30,672**	**$1,826**

Source: IMPLAN, Analysis by Beacon Economics

EXPENDITURES

OPERATIONS OF THE RAIL SYSTEM

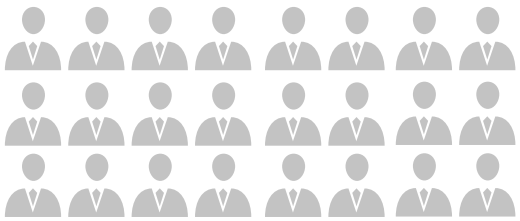
The day-to-day operations of the Project would also generate ongoing expenditures. These would come not only from the train but also from the operations, with potentially more being generated from mixed use developments near the rail line's terminus in Las Vegas. However, only the operations of the rail line are considered in this analysis. Ongoing operations for the Project are estimated to support 541 jobs annually. These jobs include railroad engineers, mechanics, station staff, and other rail road related positions.

Virgin Trains USA
Operations Employment

DEPARTMENT	POSITIONS
REGIONAL OPERATIONS MANAGEMENT	5
STATIONS	301
SAFETY AND SECURITY	41
TRANSPORTATION	80
MECHANICAL	108
RAILROAD ENGINEERING	6
TOTAL	**541**

Source: Virgin Trains USA, Analysis by Beacon Economics

In addition, about **270 JOBS** would be supported through the Project's operations annually.



ECONOMIC IMPACT

OPERATIONS OF THE RAIL SYSTEM

Not only would there be an increase in economic activity in San Bernardino County and Clark County during construction, but there also would be ongoing economic activity generated by day-to-day operations. The jobs directly supported by the rail system would also have a multiplier effect, generating economic activity beyond the initial spending. Using the IMPLAN modeling system, Beacon estimates the direct, indirect and induced economic impact of the operations of the rail system.

SAN BERNARDINO COUNTY - ECONOMIC IMPACT

In San Bernardino County, rail operations would:

- Generate **$46.9 million** in economic output, with **$30.4 million** generated from direct spending, **$8.2 million** from indirect spending and **$8.3 million** from induced spending.
- Support **404 jobs**, with **271** supported through direct spending, **65** through indirect spending and **68** through induced spending.
- Generate **$17.3 million** in labor income, with **$11.7 million** generated from direct spending, **$3.0 million** from indirect spending and **$2.7 million** from induced spending.
- Generate **$4.8 million** in federal, state, and local tax revenue.

San Bernardino County
Operations Impact Annually

IMPACT	OUTPUT ($ MILLIONS)	EMPLOYMENT	LABOR INCOME ($ MILLIONS)
DIRECT	$30.4	271	$11.7
INDIRECT	$8.2	65	$3.0
INDUCED	$8.3	68	$2.7
TOTAL	**$46.9**	**404**	**$17.3**

Source: IMPLAN, Analysis by Beacon Economics

CLARK COUNTY - ECONOMIC IMPACT

In Clark County, rail operations would:

- Generate **$73.4 million** in economic output, with **$45.4 million** generated from direct spending, **$13.3 million** from indirect spending and **$14.7 million** from induced spending.
- Support **460 jobs,** with **271** supported through direct spending, **88** through indirect spending and **102** through induced spending.
- Generate **$22.5 million** in labor income, with **$13.6 million** generated from direct spending, **$4.5 million** from indirect spending and **$4.4 million** from induced spending.
- Generate **$8.5 million** in federal, state, and local tax revenue.

Clark County
Operations Impact Annually

IMPACT	OUTPUT ($ MILLIONS)	EMPLOYMENT	LABOR INCOME ($ MILLIONS)
DIRECT	$45.4	271	$13.6
INDIRECT	$13.3	88	$4.5
INDUCED	$14.7	102	$4.4
TOTAL	**$73.4**	**460**	**$22.5**

Source: IMPLAN, Analysis by Beacon Economics

CALIFORNIA & NEVADA - ECONOMIC IMPACT

In California and Nevada, rail operations would:

- Generate **$140.4 million** in economic output, with **$76.2 million** generated from direct spending, **$32.6 million** from indirect spending and **$31.7 million** from induced spending.
- Support **937 jobs**, with **541** supported through direct spending, **189** through indirect spending and **207** through induced spending.
- Generate **$26.1 million** in labor income, with **$11.7 million** generated from direct spending, **$10.2 million** from indirect spending and **$48.0 million** from induced spending.
- Generate **$16.2 million** in federal, state, and local tax revenue.

Californria and Nevada
Operations Impact Annually

IMPACT	OUTPUT ($ MILLIONS)	EMPLOYMENT	LABOR INCOME ($ MILLIONS)
DIRECT	$76.2	541	$26.1
INDIRECT	$32.6	189	$11.7
INDUCED	$31.7	207	$10.2
TOTAL	**$140.4**	**937**	**$48.0**

Source: IMPLAN, Analysis by Beacon Economics

TEN YEAR OUTLOOK

OPERATIONS OF THE RAIL SYSTEM

Once completed the rail system will support 5,410 person-years of employment over the next decade. In this section, Beacon estimates the direct, indirect and induced economic impact of the operations of the rail system over this ten-year period.

In San Bernardino County, operations during this ten-year period will result in supporting 4,000 person-years of employment, $168.7 million in labor income, $455.8 million in economic output, and $46.3 million in tax revenue across federal, state, and local jurisdictions.

San Bernardino County
Ten Year Operations Impact

IMPACT	OUTPUT ($ MILLIONS)	EMPLOYMENT	LABOR INCOME ($ MILLIONS)
DIRECT	$295.3	2,705	$113.4
INDIRECT	$79.4	629	$28.9
INDUCED	$81.1	666	$26.4
TOTAL	**$455.8**	**4,000**	**$168.7**

Source: IMPLAN, Analysis by Beacon Economics

In Clark County, operations during this ten-year period will result in supporting 4,548 person-years of employment, $219.3 million in labor income, $713.8 million in economic output, and $82.7 million in tax revenue across federal, state, and local jurisdictions.

Clark County
Ten Year Operations Impact

IMPACT	OUTPUT ($ MILLIONS)	EMPLOYMENT	LABOR INCOME ($ MILLIONS)
DIRECT	$441.9	2,705	$132.3
INDIRECT	$129.3	855	$44.2
INDUCED	$142.6	988	$42.8
TOTAL	**$713.8**	**4,548**	**$219.3**

Source: IMPLAN, Analysis by Beacon Economics

In California and Nevada, operations during this ten-year period will result in supporting 9,260 person-years of employment, $467.0 million in labor income, $1.36 billion in economic output, and $157.5 million in tax revenue across federal, state, and local jurisdictions.

California & Nevada County
Ten Year Operations Impact

IMPACT	OUTPUT ($ MILLIONS)	EMPLOYMENT	LABOR INCOME ($ MILLIONS)
DIRECT	$741.2	5,410	$253.8
INDIRECT	$316.6	1,836	$113.9
INDUCED	$307.9	2,014	$99.3
TOTAL	**$1,365.7**	**9,260**	**$467.0**

Source: IMPLAN, Analysis by Beacon Economics

OTHER ECONOMIC AND ENVIRONMENTAL BENEFITS

The high-speed rail line will not only benefit Southern, Las Vegas, and the communities in-between during construction and operations, there will also be multiple ancillary benefits from the high-speed rail's construction. One of the most prominent will be reduced traffic on Interstate 15. Southern California has some of the worst highway traffic in the nation, as well as one of the busiest airports, and is likely to become even more so in the coming years because of continuing population growth. As a result, not only will the high-speed rail line provide time savings to passengers traveling on the rail line, it will also provide time savings to those traveling between Southern California and Las Vegas by airplane and car.

Another benefit of the high-speed rail line will be a reduction in air pollution. This benefit will come from fewer high-emitting auto and airplane trips, and from reduced time spent idling in traffic on busy weekends. The reduction in air pollution will be of particular importance to Southern California, which has some of the worst air quality in the nation.

The high-speed rail will also raise property values near each of its stations This will also encourage and facilitate denser development, which will further reduce automobile traffic in the two regions. More importantly, the rail line will also help attract companies and industries to the two regions. The areas around the station in Las Vegas will be of particular interest to investors because the stop will be passengers first or last chance for gaming experiences.

Drivers in Southern California and Las Vegas remaining on the freeways will also benefit from the high-speed rail line. With reduced congestion, less fuel is burned per mile traveled. These savings free up resources that drivers can spend on other consumption or investment. The initial direct savings will "ripple" through the economy in the same ways highlighted earlier.

WORKFORCE ANALYSIS

SAN BERNARDINO COUNTY, CALIFORNIA

The operations of the railroad and maintenance facility would require a skilled workforce. The Victorville area, and more broadly San Bernardino County, has many workers in railroad-related fields. The region is already home to a significant rail network, largely serving goods movement from the Ports of Long Beach and Los Angeles, and local airports. Over half the locomotive engineers and operators who call San Bernardino County home (514) live in the Victorville area (275). A significant number of railroad conductors and yardmasters live in the region — 312 in the Victorville area and 831 in San Bernardino County overall. In total, 2,326 workers are in railroad-related fields in the Victorville area, with an additional 5,409 living in other parts of San Bernardino County. Wages are also higher for workers in railroad transportation and maintenance positions compared to the overall county average. Between 2013 and 2017, the average countywide wage for railroad transportation and maintenance occupations was roughly $40,700 compared to just $31,500 for workers overall.

Railroad Transportation and Maintenance Employment
2013 to 2017 Average

CODE	OCCUPATION	VICTORVILLE RESIDENTS	SAN BERNARDINO COUNTY RESIDENTS
474061	Rail-Track Laying & Maintenance Equipment Operations	10	34
493040	Heavy Vehicle & Mobile Equipment Service, Technicians & Mechanics	978	2,680
4990XX	Miscellaneous Installation, Maintenance, & Repair Workers	579	2,912
534010	Locomotive Engineers & Operations	275	514
534031	Railroad Conductors & Yardmasters	312	831
5340XX	Subway, Streetcar, & Other Rail Transportation Wokers	117	257
536051	Transportation Inspectors	55	507
	TOTAL	2,326	7,735

Source: U.S. Census Bureau, American Community Survey 1-Year PUMS (2013-2017), Analysis by Beacon Economics

Railroad Transportation and Maintenance Wages
2013 to 2017 Average

CODE	OCCUPATION	SAN BERNARDINO COUNTY WAGES
474061	Rail-Track Laying & Maintenance Equipment Operations	$17,800
493040	Heavy Vehicle & Mobile Equipment Service, Technicians & Mechanics	$42,832
4990XX	Miscellaneous Installation, Maintenance, & Repair Workers	$24,566
534010	Locomotive Engineers & Operations	$61,415
534031	Railroad Conductors & Yardmasters	$57,906
5340XX	Subway, Streetcar, & Other Rail Transportation Wokers	$43,578
536051	Transportation Inspectors	$53,766
	TOTAL RAILROAD TRANSPORTAION AND MAINTENANCE	$40,734
	COUNTYWIDE AVERAGE	$31,491

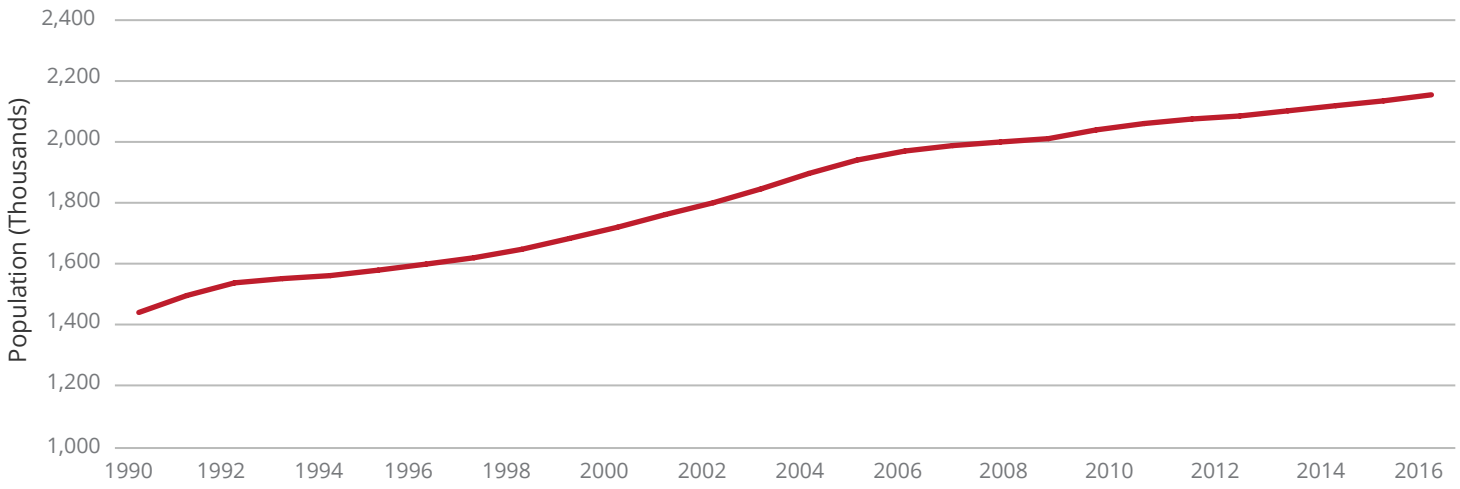
Source: U.S. Census Bureau, American Community Survey 1-Year PUMS (2013-2017), Analysis by Beacon Economics

REGIONAL PROFILE

SAN BERNARDINO COUNTY, CALIFORNIA

The population of San Bernardino County has grown considerably over the last several decades. San Bernardino County's population expanded from just 1.44 million in 1990 to over 2.15 million in 2017, a 50% increase. This pace of growth outpaced the 30% growth in the nation over the same period by a wide margin. With other parts of Southern California expanding over the last several decades as well, the region's transportation infrastructure is often pushed to its limits and innovative solutions are needed to address the region's transportation needs.

SAN BERNARDINO COUNTY POPULATION
Source: U.S. Census Bureau, Analysis by Beacon Economics



In 2017, there were a total of 730,015 payroll workers in San Bernardino County earning on average wage of $45,640. The largest industry in region was Health Care, which employed almost 103,000 workers in 2017. San Bernardino County, and more broadly the Inland Empire, is also a powerhouse for the logistics industry. While the regional industry is largely focused on goods movement, the region is a prime location for a more robust passenger movement segment. In 2017, there were roughly 2.7 times the number of Logistics jobs in San Bernardino County relative to the nation overall. This means the region not only has a relative abundance of workers already working in the Transportation industry, but that the downstream industries that support the industry also have a strong foothold in the region.

San Bernardino County
Industry Profile (2017)

INDUSTRY	EMPLOYMENT	ANNUAL WAGE	LOCATION QUOTIENT
TOTAL	730,015	$45,640	1.0
LOGISTICS	74,587	$44,942	2.7
WHOLESALE TRADE	39,241	$57,262	1.3
GOVERNMENT	121,448	$58,702	1.1
RETAIL TRADE	87,871	$31,611	1.1
HEALTH CARE	102,872	$47,322	1.0
LEISURE AND HOSPITALITY	74,074	$19,138	0.9
MANUFACTURING	55,328	$55,670	0.9
OTHER SERVICES	19,372	$35,379	0.9
NR/CONSTRUCTION	37,093	$58,961	0.8
PROFESSIONAL AND BUSINESS SERVICES	78,439	$44,539	0.8
EDUCATION	9,295	$47,247	0.6
FINANCIAL ACTIVITIES	22,106	$55,572	0.5
INFORMATION	5,103	$58,574	0.4

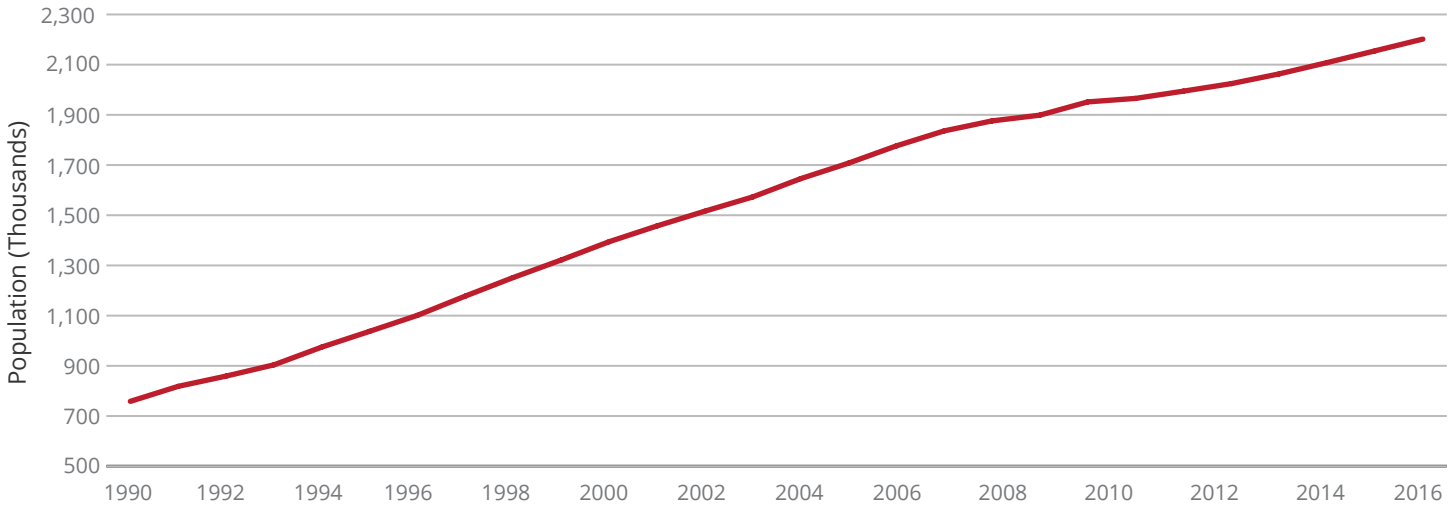
Source: U.S. Bureau of Labor Statistics, Analysis by Beacon Economics

REGIONAL PROFILE

CLARK COUNTY, NEVADA

The population of Clark County has grown rapidly over the last several decades. Clark County's population expanded from just over 750,000 in 1990 to over 2.2 million in 2017, an over 190% increase. This pace of growth dwarfed the 30% growth in the nation over the same period. While Clark County's transportation has been able to accommodate this growth, it has put a strain on the transportation infrastructure linking it to other metropolitan areas, particularly Southern California.

CLARK COUNTY POPULATION
Source: U.S. Census Bureau, Analysis by Beacon Economics



In 2017, there were a total of 964,371 payroll workers in Clark County earning on average wage of $47,391. The largest industry in region was Leisure and Hospitality, which employed over 288,000 workers in 2017. Leisure and Hospitality was also the largest industry based on relative size, with 2.7 times the number of Leisure and Hospitality jobs in Clark County relative to the nation overall. Clark County also has a developed Logistics industry, employing 21,591 workers who earn just over $102,000 annually. Additionally, there are 1.2 times the number of Logistics workers in Clark County relative to the nation overall. While the Logistics industry is not as large as San Bernardino County's, the region's Logistics industry is posed for growth, particularly in support of the regions robust Leisure and Hospitality industry.

Clark County
Industry Profile (2017)

INDUSTRY	EMPLOYMENT	ANNUAL WAGE	LOCATION QUOTIENT
TOTAL	964,371	$47,391	1.0
LOGISTICS	288,642	$34,818	2.7
WHOLESALE TRADE	43,184	$51,211	1.2
GOVERNMENT	60,341	$57,363	1.0
RETAIL TRADE	108,073	$31,131	1.0
HEALTH CARE	138,273	$58,072	1.0
LEISURE AND HOSPITALITY	47,430	$62,391	0.9
MANUFACTURING	24,817	$35,377	0.8
OTHER SERVICES	100,180	$58,169	0.7
NR/CONSTRUCTION	85,774	$54,581	0.7
PROFESSIONAL AND BUSINESS SERVICES	11,325	$64,697	0.6
EDUCATION	22,621	$77,229	0.6
FINANCIAL ACTIVITIES	9,539	$44,837	0.5
INFORMATION	22,936	$54,640	0.3

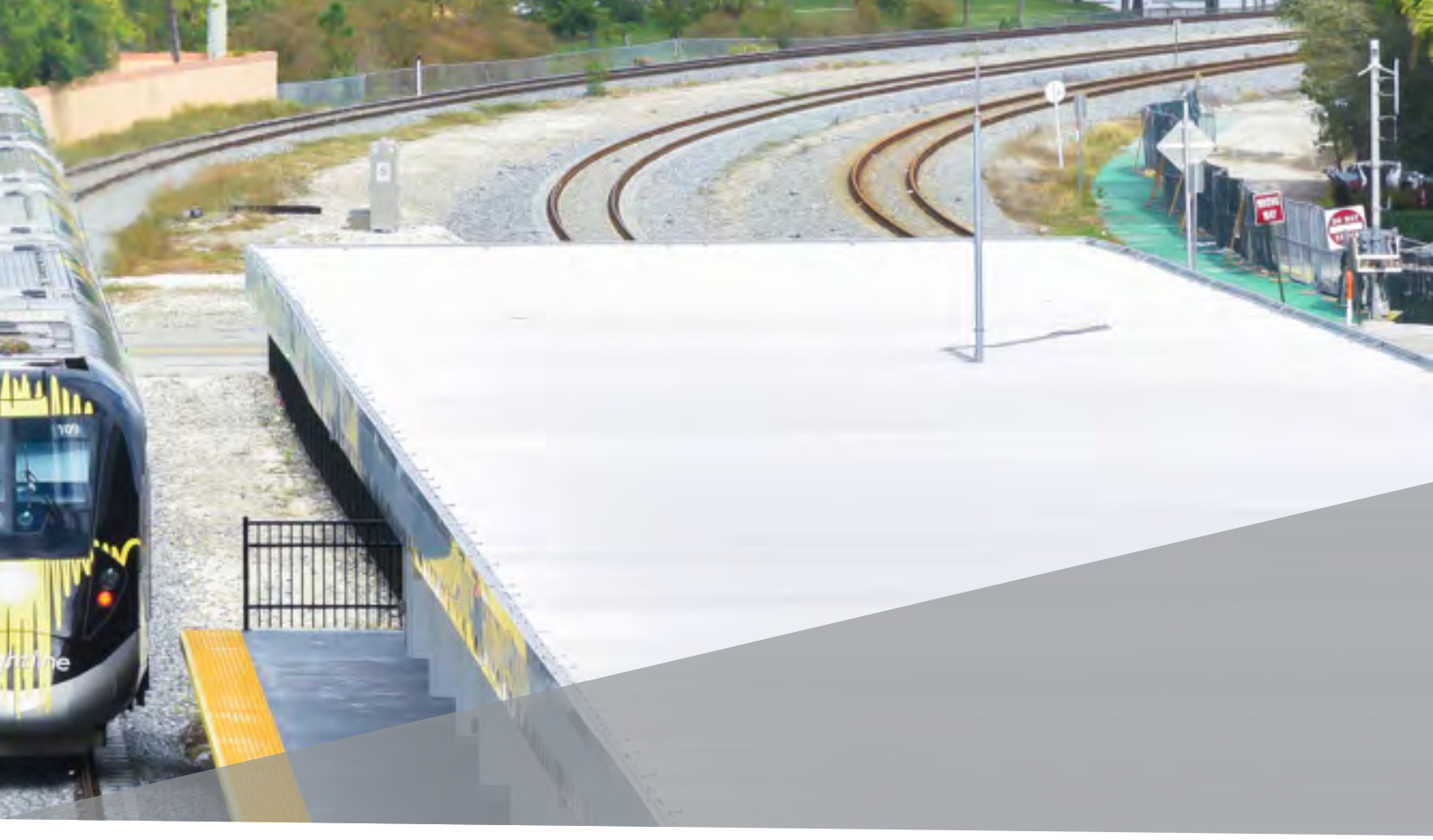
Source: U.S. Bureau of Labor Statistics, Analysis by Beacon Economics

APPENDIX

IMPLAN METHODOLOGY

The IMPLAN modeling system combines the U.S. Bureau of Economic Analysis' Input-Output Benchmarks with other data to construct quantitative models of trade flow relationships between businesses, and between businesses and final consumers. From this data, we can examine the effects of one or several economic activities to estimate its impact on a specific state, region or local area. The IMPLAN input-output accounts capture all monetary market transactions for consumption in a given time period. The IMPLAN input-output accounts are based on industry survey data collected periodically by the U.S. Bureau of Economic Analysis and follow a balanced account format recommended by the United Nations.

IMPLAN's Regional Economic Accounts and the Social Accounting Matrices are used to construct region-level multipliers that describe the response of the relevant regional economy to a change in demand or production as a result of tribal gambling activities. Each industry that produces goods or services generates demand for other goods and services, and this is multiplied through a particular economy until it dissipates through "leakage" to economies outside the specified area. IMPLAN models discern and calculate leakage



from local, regional and state economic areas based on workforce configuration, the inputs required by specific types of businesses, and the availability of both inputs in the economic area. Consequently, economic impacts that accrue to other regions or states because of a change in demand are not counted as impacts within the economic area.

The model accounts for substitution and displacement effects by deflating industry-specific multipliers to levels well below those recommended by the U.S. Bureau of Economic Analysis. In addition, when estimating the impact of household spending, multipliers are applied only to personal disposable income to obtain a more realistic estimate of the multiplier effects generated by increased demand. Importantly, IMPLAN's Regional Economic Accounts exclude imports to an economic area, so the calculation of economic impacts identifies only those impacts specific to the economic impact area, as determined by the purchasing patterns of the industries where changes in output are occurring. IMPLAN calculates this distinction by applying the area's economic characteristics described in terms of actual trade flows within the area. The current version of IMPLAN not only identifies what proportion of inputs is purchased locally, but also determines input sources that are not obtained within the local economic area. This enables a user to estimate the impact of a spending increase in one economy on other nearby economies and how increased economic activity in those areas in turn impact the original study area.

ABOUT BEACON ECONOMICS

Beacon Economics LLC is one of California's leading economic research and consulting firms, specializing in economic and revenue forecasting, economic/fiscal/social impact analysis, sustainable growth and development, public policy analysis, regional economic analysis, and real estate market and industry analysis. Known for delivering independent and rigorous research products, Beacon Economics provides economic trend and data analysis that strengthens strategic decisionmaking about investment, revenue, and policy. In 2015, the firm partnered with the University of California, Riverside in establishing the Center for Economic Forecasting and Development at the School of Business. The firm's internationally recognized forecasters were among the first and most accurate predictors of the U.S. mortgage market meltdown that began in 2007 – and among a relatively small handful of researchers who correctly calculated the depth and breadth of the financial and economic crisis that followed. Clients range from the State of California to Fortune 500 companies to major cities and universities. Learn more at www.BeaconEcon.com.

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