

# ATTACHMENT P

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## Socioeconomic Review

# Goose Prairie Solar

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## Socioeconomic Review

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December 2020

## Executive Summary

This Socioeconomic Review addresses components of WAC 463-60-535 as discussed in conversations with EFSEC. The document contains information about population and labor force impacts and housing. Even at peak construction, the Facility will not require enough workers to significantly impact the overall unemployed labor force in Yakima County. There are sufficient laborers for Facility construction and operations within a reasonable commuting distance. Any non-local hires may commute from within Yakima County or the Tri-Cities area or they may relocate temporarily. There is sufficient capacity to house any temporary workers in hotels, motels or RV parks.

### 1. Population and Labor Force Impacts

#### a. Population and growth rate data for the most current ten-year period.

Table 1 shows population information for the City of Moxee, City of Yakima, Yakima County, and State of Washington for 2010 and 2018. All four areas experienced population growth during this period. The City of Moxee experienced the highest growth rate (19.65%) from 2010 to 2018. The City of Yakima and Yakima County had a growth rate of 2.58% and 2.51% respectively while Washington had an overall growth rate of 8.47%.

Table 1: Population and Growth Rate Data (2010 and 2018)

Jurisdiction	2010 Census Population	2018 Population (2010-2018)	Population Change	Percent Change per Year (2010-2018)
City of Moxee	3,308	3,958	650	19.65%
City of Yakima	91,067	93,416	2,349	2.58%
Yakima County	243,231	249,325	6,094	2.51%
Washington	6,724,540	7,294,336	569,796	8.47%

Source: U.S. Census Bureau (<https://www.census.gov/data.html>)

#### b. Published forecast population figures for the study area for both the construction and operation periods.

The Washington State Office of Financial Management’s (OFM) population forecast for 2019 indicates that the projected population of Washington State is estimated to be 7,969,840 by 2025 and 8,937,114 by 2040. From the 2018 population data, this represents a growth of 9% and 22% respectively. The OFM population forecasts for Yakima County are shown in Table 2. The Medium Projection estimates a population growth of 13% by 2025 and 27% by 2040. Thus, the Yakima County population is projected to grow by a greater percentage than Washington State during the construction and operation phase of the Facility.

Table 2: OFM Population Projections for Yakima County

OFM Low Projections			
2025	2030	2035	2040
241,402	246,769	251,955	256,834
OFM Medium Projections			
2025	2030	2035	2040
282,057	294,445	306,636	318,494
OFM High Projections			
2025	2030	2035	2040
342,341	363,341	384,341	405,341

Source: Yakima County GMA June 2017

**c. Numbers and percentages describing the race/ethnic composition.**

Table 3 shows the aggregate population as well as population percentage of racial/ethnic categories for the City of Moxee, City of Yakima, Yakima County, and Washington in 2018. Hispanic or Latino populations comprise the largest racial/ethnic group in the City of Moxee (50.23%) and Yakima County (48.91%) as well as a large portion of the total population in the City of Yakima (46.40%). In Washington, Hispanic or Latino populations only represent 12.50% of the total population. White alone populations represent the largest racial/ethnic categories in the City of Yakima (47.89%) Washington (69.09%).

Table 3: Population by Race/Ethnicity (2018)

	City of Moxee	City of Yakima	Yakima County	Washington
Total Population	3,958	93,416	249,325	7,294,336
Not Hispanic or Latino:	1,970 (49.77%)	50,075 (53.60%)	127,381 (51.09%)	6,382,763 (87.50%)
• White alone	1,561 (39.44%)	44,738 (47.89%)	108,938 (43.69%)	5,039,208 (69.09%)
• Black or African American alone	147 (3.71%)	997 (1.07%)	1,935 (0.78%)	259,482(3.56%)
• American Indian and Alaska Native alone	148 (3.74%)	1,240 (1.33%)	8,962 (3.59%)	80,274 (1.10%)
• Asian alone	40 (1.01%)	1,085 (1.16%)	2,174 (0.87%)	602,020 (8.25%)
• Native Hawaiian and Other Pacific Islander alone	-	17 (0.02%)	173 (0.07%)	46,476 (0.64%)
• Some other race alone	-	55 (0.06%)	107(0.04%)	12,077 (0.17%)
• Two or more races:	74 (1.87%)	1,943(2.08%)	5,092 (2.04%)	343,226(4.71%)
○ Two races including Some other race	8 (0.20%)	-	65 (0.03%)	6,662 (0.09%)
○ Two races excluding Some other race, and three or more races	66 (1.67%)	1,943(2.08%)	5,027 (2.02%)	336,564 (4.61%)
Hispanic or Latino:	1,988 (50.23%)	43,341 (46.40%)	121,944 (48.91%)	911,573 (12.50%)
• White alone	1,096 (27.69%)	25,862 (27.68%)	85,858 (34.44%)	506,789 (6.95%)
• Black or African American alone	-	596 (0.64%)	750 (0.30%)	10,372 (0.14%)
• American Indian and Alaska Native alone	53 (1.34%)	758 (0.81%)	1,520 (0.61%)	14,774 (0.14%)
• Asian alone	-	-	93 (0.04%)	5,409 (0.07%)
• Native Hawaiian and Other Pacific Islander alone	-	-	8 (0.003%)	1,567 (0.02%)
• Some other race alone	719 (18.17%)	14,457 (15.48%)	30,471 (12.22%)	299,093 (4.10%)
• Two or more races:	120(3.03%)	1,668 (1.79%)	3,244 (1.30%)	73,569 (1.01%)
○ Two races including Some other race	18 (0.45%)	1,002 (1.07%)	1,818 (0.73%)	33,979 (0.47%)
○ Two races excluding Some other race, and three or more races	102 (2.58%)	666 (0.71%)	1,426 (0.57%)	39,590 (0.54%)

Source: U.S. Census Bureau ( <https://www.census.gov/data.html>)

**d. Aggregate per capita and household incomes, including the number and percentages of the population below the poverty level.**

As seen in Table 4, the City of Moxee has the highest proportion of residents living below the poverty level (24%) followed by the City of Yakima (20%). The City of Yakima has the lowest median household income (\$44,266) followed by Yakima County (\$49,871). Washington as a whole has the lowest

proportion of residents living below the poverty level (12%) as well as the highest median household income (\$70,116).

Table 4: Income and Poverty Level (2018)

	Median Household Income	Per Capita Income	Population Below Poverty Level	Percent Below Poverty Level
City of Moxee	\$53,024	\$18,290	942	24%
City of Yakima	\$44,266	\$23,013	18,081	20%
Yakima County	\$49,871	\$22,459	44,600	18%
Washington	\$70,116	\$36,888	821,621	12%

Source: U.S. Census Bureau ( <https://www.census.gov/data.html>)

**e. A description of whether or not any minority or low-income populations would be displaced by this project or disproportionately impacted.**

As described in Part 3, Section 15 of the Application, the Facility will not displace existing or future housing, including housing for low- and moderate-income households. Only one parcel that may be utilized for an aerial easement contains a residence. However, such an easement would not displace the residence. Furthermore, local land use planning documents, including the Yakima County Comprehensive Plan, have not identified the Facility Area Extent as a site for future residential growth.

**f. The average annual work force size, total number of employed workers, and the number and percentage of unemployed workers including the year that data are most recently available. Employment numbers and percentage of the total work force should be provided for the primary employment sectors.**

Tables 5 and 6 identify the available labor force, employed population, and unemployed population in aggregation and by industry in the City of Moxee, City of Yakima, Yakima County, and Washington. The City of Moxee and City of Yakima have the highest unemployment rates (6.9%). In both those areas, the educational and health care industry employs the most people, followed by retail trade and agriculture.

Table 5: Labor Force Data (2018)

	Labor Force Population 16 Years Old and Over	Employed Population	Employment Rate	Unemployed Population	Unemployment Rate
City of Moxee	2,518	1,654	65.7%	173	6.9%
City of Yakima	70,122	39,941	57.0%	4,838	6.9%
Yakima County	182,459	104,784	57.4%	12,042	6.6%
Washington	5,843,155	3,513,856	60.1%	309,687	5.3%

Source: U.S. Census Bureau ( <https://www.census.gov/data.html>)

Table 6: Employed Population by Industry (2018)

	City of Moxee	City of Yakima	Yakima County	Washington
Civilian employed population 16 years and over	1,654	39,941	104,784	3,513,856
• Agriculture, forestry, fishing and hunting, and mining:	147	4,288	17,144	91,208
○ Agriculture, forestry, fishing and hunting	147	4,288	17,099	87,715
○ Mining, quarrying, and oil and gas extraction	-	-	45	3,493

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• Construction	22	1,829	5,550	230,167
• Manufacturing	170	3,386	9,223	354,379
• Wholesale trade	54	2,063	4,926	97,502
• Retail trade	262	4,512	10,755	411,244
• Transportation and warehousing, and utilities:	96	3,282	7,699	186,128
○ Transportation and warehousing	69	3,211	7,236	159,221
○ Utilities	27	71	463	26,907
• Information	7	442	958	78,995
• Finance and insurance, and real estate and rental and leasing:	84	1,371	2,955	187,588
○ Finance and insurance	66	993	2,095	115,278
○ Real estate and rental and leasing	18	378	860	72,310
• Professional, scientific, and management, and administrative and waste management services:	134	2,399	5,909	454,863
○ Professional, scientific, and technical services	120	1,165	2,772	318,515
○ Management of companies and enterprises	0	11	11	3,845
○ Administrative and support and waste management services	14	1,223	3,126	132,503
• Educational services, and health care and social assistance:	423	9,466	22,667	757,898
○ Educational services	171	3,156	8,668	29,6475
○ Health care and social assistance	252	6,310	13,999	461,423
• Arts, entertainment, and recreation, and accommodation and food services:	107	3,158	7,826	324,204
○ Arts, entertainment, and recreation	21	542	1,758	82,479
○ Accommodation and food services	86	2,616	6,068	241,725
• Other services, except public administration	75	2,079	4,422	161,118
• Public administration	73	1,666	4,750	178,562

Source: U.S. Census Bureau ( <https://www.census.gov/data.html>)

### **g. An estimate by month of the average size of the project construction, operational work force by trade, and work force peak periods.**

Table 7 provides a proposed schedule for site preparation, construction, operation/use, and closure/reclamation. Construction is scheduled to begin April 2022. Construction will require approximately 9 months to complete. As outlined in Part 2 of the Application, at peak construction the Facility will employ up to 300 workers. During the first 30 days there would be clearing and grubbing activities and grading of access roads. Construction personnel should be limited to less than 20 workers during this period. Once the facility construction begins, the onsite head count should begin to increase and peak at approximately 300 workers. During the final 30-day period, the electrical work will be completed and the headcount will begin dropping back to approximately 30 workers.

*Table 7: Proposed Schedule and Workforce*

Phase	Proposed Timing	Duration	Employee numbers on site & frequency
Site preparation	Mar 2022	30 days	<20
Construction	Apr-Dec 2022	270 days	Estimated max of 300
Operation/use	Dec 31, 2022	35 years	None full-time
Closure/reclamation	End of project	6-8 weeks	TBD

- h. An analysis of whether or not the locally available work force would be sufficient to meet the anticipated demand for direct workers and an estimate of the number of construction and operation workers that would be hired from outside of the study area if the locally available work force would not meet the demand.**

Utility-scale projects typically create 3.3 construction jobs per MW. An 80 MW would be expected to create about 264-300 construction jobs. Up to 80% of large-scale solar construction jobs can be sourced through local and/or veteran labor. Since there are 12,042 unemployed people in Yakima County (Table 5), the unemployed labor pool can provide the estimated 264 construction jobs required for the Facility. Even at peak construction, the Facility will not require enough workers to significantly impact the overall unemployed labor population in Yakima County.

- i. A list of the required trades for the proposed project construction.**

Trades required during the construction phase of the Facility include:

- Electricians
- Truck Drivers for semi-tractor trailers, concrete mixing trucks, dump trucks, and water trucks
- Heavy equipment operators for excavators, backhoes, graders, trenchers, bore/drill rigs, paving equipment, and fork lifts.
- Form construction and cement workers
- General laborers to install fencing and operate other material handling equipment

- j. An estimate of how many direct or indirect operation and maintenance workers (including family members and/or dependents) would temporarily relocate.**

According to Table 7, the Facility will not employ any full-time operation and maintenance workers. During the operation/use phase, employee site visits will be infrequent. Thus, it is not expected that any direct or indirect operation and maintenance would temporarily relocate.

- k. An estimate of how many workers would potentially commute on a daily basis and where they would originate.**

As previously indicated, up to 80% of large-scale solar construction jobs can be sourced through local and/or veteran labor. At peak construction (300 maximum daily workers), that equates to 240 jobs that can be sourced within Yakima County. Commuting distance will vary but it can be assumed most workers will commute from the City of Yakima and surrounding area, which is approximately 8 miles from the Facility in Moxee, WA.

The 60 non-local hires that the Facility may require could commute from other nearby cities, such as Ellensburg (43 miles) and the Tri-Cities (70 miles).

## 2. Housing Impacts

- a. **Housing data from the most recent ten-year period that data are available, including the total number of housing units in the study area, number of units occupied, number and percentage of units vacant, median home value, and median gross rent. A description of the available hotels, motels, bed and breakfasts, campgrounds or other recreational facilities.**

Tables 8 and 9 summarize the housing characteristics for the City of Moxee, City of Yakima, Yakima County, and Washington for 2018 and 2010. In 2018, the City of Moxee had the lowest percent of vacant units (3.4%), while Washington had the highest percent of vacant units (8.6%). The vacancy percentages are comparable to the 2010 figures. Median home value and median gross rent, in both 2018 and 2010, were highest in Washington. In 2018, the City of Yakima had the lowest median home value (\$164,200) and median gross rent (\$80/month). In 2010, Yakima County had the lowest median home value (\$149,700) and median gross rent (\$644/month).

Table 8: Housing Characteristics for 2018

	Total Number of Housing Units	Number of Units Occupied	Number and Percent of Units Vacant	Median Home Value (owner-occupied units)	Median Gross Rent (per month)
City of Moxee	1,103	1,065	38 (3.4%)	\$171,700	\$1,077
City of Yakima	35,658	33,557	2,101 (5.9%)	\$164,200	\$801
Yakima County	88,226	82,300	5,926 (6.7%)	\$167,700	\$803
Washington	3,064,381	2,800,423	263,958 (8.6%)	\$311,700	\$1,194

Source: U.S. Census Bureau (<https://www.census.gov/data.html>)

Table 9: Housing Characteristics for 2010

	Total Number of Housing Units	Number of Units Occupied	Number and Percent of Units Vacant	Median Home Value (owner-occupied units)	Median Gross Rent (per month)
City of Moxee	826	800	26 (3.1%)	\$160,500	\$960
City of Yakima	34,828	32,794	2,034 (5.8%)	\$152,800	\$649
Yakima County	84,387	79,075	5,312 (6.3%)	\$149,700	\$644
Washington	2,829,352	2,577,375	251,977 (8.9%)	\$285,400	\$882

Source: U.S. Census Bureau (<https://www.census.gov/data.html>)

Table 10 identifies a portion of available hotels and lodging accommodations available in Yakima County as of 2020 according to the Yakima County Chamber of Commerce. These 17 facilities represent a variety of hotels, motels, and bed and breakfasts available for short-term rentals.

Table 10: Selected Hotels and Other Accommodations in Yakima County

Accommodation	Location
Best Western Plus Yakima Hotel	1st St, Yakima, WA
Comfort Suites Yakima	Fruitvale Blvd, Yakima, WA
Fairfield Inn & Suites by Marriott	N Fair Ave, Yakima, WA



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Hilton Garden Inn Yakima	E Yakima Ave, Yakima, WA
Holiday Inn – Downtown Yakima	E Yakima Ave, Yakima, WA
Home2 Suites by Hilton Yakima	W Nob Hill Blvd, Yakima
Hotel Maison	E Yakima Ave, Yakima, WA
Howard Johnson Plaza Hotel	N 9th St, Yakima, WA
Ledgestone Hotel	N Fair Ave, Yakima, WA
Motel 6 Yakima	E Staff Sgt Pendleton Way, Yakima, WA
My place Hotel Yakima	S 18th St, Yakima, WA
Oxford Suites	E Yakima Ave, Yakima, WA
Red Lion Hotel Yakima Center	E Yakima Ave, Yakima, WA
Super 8 Model of Yakima	South Rudkin Rd Union Gap Interchange, Union Gap
The Hotel Y	N 1st St, Yakima, WA
Union Gospel Mission	N 1st St, Yakima, WA
Yakima Legends Casino Hotel	Fort Rd, Toppenish, WA

Source: Yakima County Chamber of Commerce

**b. How and where the direct construction and indirect work force would likely be housed. A description of the potential impacts on area hotels, motels, bed and breakfasts, campgrounds and recreational facilities.**

The majority (80%) of direct construction and indirect workers would likely be local hires. The 20% of non-local hires would likely commute from within Yakima County or the Tri-Cities. Thus, it is not anticipated that the construction of the Facility would result in the permanent relocation of any of the construction workforce. In addition, according to Table 10, there is sufficient capacity to house any temporary workers in hotels, motels, or RV parks. Due to the small number of temporary workers required for construction, the impact to these accommodation facilities is expected to be insignificant.

**c. Whether or not meeting the direct construction and indirect work force's housing needs might constrain the housing market for existing residents and whether or not increased demand could lead to increased median housing values or median gross rents and/or new housing construction. Describe mitigation plans, if needed, to meet shortfalls in housing needs for these direct and indirect work forces.**

As described in the previous section, construction of the Facility is not anticipated to result in the permanent relocation of any of the construction workforce. Thus, there would be no impacts on the housing market for existing residents in the City of Moxee, City of Yakima, or Yakima County. Construction would not result in increased median housing values or median gross rents.