Attachment H: Socioeconomic Review

## **Socioeconomic Review**

### Wallula Gap Solar Project

October 2023

**Prepared for:** 



2003 Western Ave #225 Seattle, WA 98121

#### **Prepared by:**



1750 S Harbor Way, Suite 400 Portland, OR 97201

### **Table of Contents**

1.0	PROJECT OVERVIEW 1								
2.0	SUM	MARY O	F RESULTS 1						
3.0	SOC	DCIOECONOMICS STUDY AREA1							
4.0	POP	ULATIOI	N, LABOR FORCE, AND HOUSING 2						
	4.1	Popula	tion and Labor Force Impacts						
		a)	Population and growth rate data for the most current ten-year period for the county or counties and incorporated cities in the study area						
		b)	Published forecast population figures for the study area for both the construction and operation periods						
		c)	Numbers and percentages describing the race/ethnic composition of the cities and counties in the study area						
		d)	Aggregate per capita and household incomes, including the number and percentages of the population below the poverty level for the cities and counties within the study area						
		e)	A description of whether or not any minority or low-income populations would be displaced by this project or disproportionately impacted						
		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						
		g)	An estimate by month of the average size of the project construction, operational work force by trade, and work force peak periods						
		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						
		i)	A list of the required trades for the proposed project construction14						
		j)	An estimate of how many direct or indirect operation and maintenance workers (including family members and/or dependents) would temporarily relocate 15						
		k)	An estimate of how many workers would potentially commute on a daily basis and where they would originate						
	4.2	Housin	g 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 descripion of the available hotels, motels, bed and breakfasts, campgrounds or other recreational facilities
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
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/o new housing construction. Describe mitigation plans, if needed,

to meet shortfalls in housing needs for these direct and indirect work forces...... 22

### **List of Tables**

Table 1.	Population in Washington Counties and Incorporated Communities in the
	Socioeconomic Study Area3
Table 2.	Population in Oregon Counties and Incorporated Communities in the Socioeconomic
	Study Area4
Table 3.	Population Projections for Washington Counties in the Socioeconomic Study Area, 2020
	to 2050
Table 4.	Population Projections for Oregon Counties in the Socioeconomic Study Area, 2020 to
	2050
Table 5.	Race and Ethnicity in Washington Counties and Incorporated Communities in the
	Socioeconomic Study Area, 2021
Table 6.	Race and Ethnicity in Oregon Counties and Incorporated Communities in the
	Socioeconomic Study Area, 2021
Table 7.	Income and Poverty in Washington Counties and Incorporated Communities in the
	Socioeconomic Study Area, 2021
Table 8.	Income and Poverty in Oregon Counties and Incorporated Communities in the
	Socioeconomic Study Area, 2021
Table 9.	Average Annual Workforce, 2022
Table 10.	Employment by Economic Sector, 2021
Table 11.	Existing Construction Workforces in the Kennewick-Richland and Walla Walla MSAs by
	Occupation, 2022
Table 12.	Housing Characteristics in Washington Counties and Incorporated Communities in the
	Socioeconomic Study Area, 2021
Table 13.	Housing Characteristics in Oregon Counties and Incorporated Communities in the
	Socioeconomic Study Area, 2021
Table 14.	Number of Housing Units in Washington Counties and Incorporated Communities in the
	Socioeconomic Study Area, 2012 and 2021

Table 15.	Number of Housing Units in Oregon Counties and Incorporated Communities in the	
	Socioeconomic Study Area, 2012 and 2021	.18
Table 16.	Rental Housing in Washington Counties and Incorporated Communities in the	
	Socioeconomic Study Area, 2021	. 19
Table 17.	Rental Housing in Oregon Counties and Incorporated Communities in the	
	Socioeconomic Study Area, 2021	. 19

### **List of Figures**

Figure 1.	Estimated Average On-Site Construction Work	force by Month13
		=======================================

### **1.0 PROJECT OVERVIEW**

Wallula Gap Solar, LLC (the Applicant), a subsidiary of OneEnergy Renewables, proposes to construct and operate the Wallula Gap Solar Project (the Facility), a 60 megawatt solar photovoltaic project with an optional battery energy storage system in unincorporated Benton County, Washington. The Facility will be located approximately 4 miles northwest of the unincorporated community of Plymouth on parcels located north of Washington Highway 14, approximately 5 miles west of its intersection with Interstate 82. The Facility will interconnect through a line tap to Benton Public Utility District's 115 kilovolt line near the Prior #2 substation, located directly adjacent to the Facility area. Facility construction is anticipated to begin in Q4 of 2025, with a Commercial Operations Date planned for December 31, 2026. The expected life of the Facility is assumed to be 35 years.

### 2.0 SUMMARY OF RESULTS

This Socioeconomic Review addresses components of Washington Administrative Code (WAC) 463-60-535 for the Application for Site Certification (ASC). The document contains information about impacts to population, labor force, and housing. The Applicant anticipates that approximately 50 percent of the workforce would be local workers. While the local share of the workforce could be higher, for the purposes of analysis we assume that 50 percent would be local, with the remaining 50 percent assumed to be non-local. The following review indicates that, at peak construction, the locally available workforce should be sufficient to meet demand for local direct workers, which are assumed for this analysis to account for 50 percent of the total construction workforce. Local workers are those who normally reside within daily commuting distance of the Facility site and would commute daily to the Facility site from their homes. Non-local workers hired from outside the area are expected to temporarily relocate to the vicinity of the Facility for the duration of their employment. The following review suggests that there are sufficient housing resources to accommodate non-local workers and the temporary influx of these workers is not expected to constrain the housing market for existing residents or result in changes in housing values, rents, or new housing construction.

### 3.0 SOCIOECONOMICS STUDY AREA

The primary socioeconomic study area for this analysis is based on WAC 463-60-535 and incorporates areas that may be affected by employment within a one-hour commute of the Facility Area. The Facility Area is located in unincorporated Benton County, Washington, approximately four miles northwest of the community of Plymouth, and just north of the Columbia River. Areas within a one-hour commute of the Facility site include the Tri-Cities of Kennewick, Pasco, and Richland, located about 30 minutes' drive to the northeast, as well as the cities of Boardman, Hermiston, and Pendleton, located south across the Columbia River in Oregon.

The cities of Kennewick and Richland are located in Benton County; the city of Pasco is located in Franklin County. Also in Washington, the cities of Walla Walla and College Place in Walla Walla County are approximately one-hour's drive from the Facility site. Together, these three counties—Benton, Franklin, and Walla Walla—form the Kennewick-Richland-Walla Walla Combined Statistical Area (CSA). This CSA consists of two adjacent Metropolitan Statistical Areas (MSAs)—Kennewick-Richland and Walla Walla—that share economic ties measured by commuting patterns. South of the Columbia River, Morrow and Umatilla counties, Oregon, together, make up the Hermiston-Pendleton Micropolitan Statistical Area (MiSA).<sup>1</sup> Incorporated communities within an approximate one-hour commute of the Facility Area are identified in Table 1, below.<sup>2</sup>

### 4.0 POPULATION, LABOR FORCE, AND HOUSING

This section addresses components of WAC 463-60-535 related to population, labor force, and housing.

### 4.1 Population and Labor Force Impacts

### a) Population and growth rate data for the most current ten-year period for the county or counties and incorporated cities in the study area.

Benton County had an estimated population of 215,500 in 2023 (Table 1). A majority of the population (83 percent) lived in one of five incorporated communities, with more than two-thirds of the total living in either Kennewick (40 percent) or Richland (29 percent). The tenth most populated county in Washington, Benton County had an average population density of 126.7 people per square mile in 2023 compared to a statewide average of 119.6 people per square mile (Washington Office of Financial Management [OFM] 2023a, U.S. Census Bureau 2023a).

Total population in Benton County increased by 28,500 people or 15.3 percent between 2014 and 2023, an increase above the state average of 13.5 percent over the same period (Table 1). Population growth results from either net in-migration or natural increase. Net in-migration occurs when more people move to an area than leave. Natural increase occurs when there are more births than deaths. Migration accounted for 75 percent of statewide population growth in Washington between 2014 and 2023, with natural increase accounting for the remaining 25 percent. Migration played a slightly smaller role in Benton County, accounting for approximately 69 percent of population growth over this period, with natural increase accounting for the remaining 31 percent (Washington OFM 2023b).

Franklin County had an estimated population of 101,100 in 2023 (Table 1). The majority of the population (80 percent) lives in the city of Pasco, with the remaining population divided between three other incorporated communities (Mesa, Connell, and Kahlotus) (5 percent) and unincorporated areas (14 percent).<sup>3</sup> Franklin County was the fourteenth most populated county in Washington in 2023, with an average population density of 81.4 people per square mile compared to a statewide average of 119.6 people per square mile (Washington OFM 2023a, U.S. Census Bureau 2023a).

<sup>&</sup>lt;sup>1</sup> MSAs and MiSAs consist of integrated geographic regions typically made up of an urbanized economic core and economically related counties (Office of Management and Budget 2020). MSAs have at least one urbanized area of 50,000 or more population; MiSAs have at least one urban area with a population of 10,000 to 50,000. <sup>2</sup> Yakima County, Washington and Gilliam County, Oregon are also partially within an approximate one-hour

commute of the Project area. However, existing employment and commuting patterns suggest that Project employment would have limited impacts on these counties. These counties are, therefore, not included as part of the study area.

<sup>&</sup>lt;sup>3</sup> Percentages do not sum to 100 due to rounding.

			2014 to 2023		
Geographic Area	2014	2023	Net Change	Percent Change	Annual Growth Rate (Percent)
Benton County <sup>1/</sup>	186,954	215,500	28,546	15.3	1.4
Benton City	3,222	3,810	588	18.2	1.7
Kennewick	77,363	86,470	9,107	11.8	1.1
Prosser	5,736	6,445	709	12.4	1.2
Richland	52,880	63,320	10,440	19.7	1.8
West Richland	13,822	17,840	4,018	29.1	2.6
Unincorporated	33,931	37,615	3,684	10.9	1.0
Franklin County <sup>2/</sup>	86,544	101,100	14,556	16.8	1.6
Mesa	452	390	-62	-13.7	-1.5
Pasco	67,894	81,280	13,386	19.7	1.8
Other Incorporated	5,488	5,105	-383	-7.0	-0.7
Unincorporated	12,710	14,325	1,615	12.7	1.2
Walla Walla County <sup>3/</sup>	60,459	63,100	2,641	4.4	0.4
College Place	9,126	9,890	764	8.4	0.8
Walla Walla	32,309	34,310	2,001	6.2	0.6
Other Incorporated	1,528	1,560	32	2.1	0.2
Unincorporated	17,496	17,340	-156	-0.9	-0.1
Washington State	7,005,209	7,951,150	945,941	13.5	1.3

### Table 1. Population in Washington Counties and Incorporated Communities in the Socioeconomic Study Area

Source: Washington OFM 2022, 2023a

1/ All five incorporated communities in Benton County are within an approximately one-hour commute from the Facility.

2/ Two of the four incorporated communities in Franklin County are within an approximately one-hour commute; the other two, not included here (Connell and Kahlotus), are more than one hour away.

3/ Two of the four incorporated communities in Walla Walla County are an approximately one-hour commute from the Facility site; the other two, not included here (Prescott and Waitsburg), are more than one hour away.

Total population in Franklin County increased by an estimated 14,600 people or 16.8 percent between 2014 and 2023, an increase above the state average of 13.5 percent (Table 1). Natural increase accounted for slightly more than two-thirds (68 percent) of the increase, with net in-migration making up the remaining 32 percent (Washington OFM 2023b).

Walla Walla County had an estimated population of 63,100 in 2023 (Table 1). More than two-thirds of the population (70 percent) lives in the cities of Walla Walla (54 percent) or College Place (16 percent); most of the remaining population (27 percent) lives in unincorporated parts of the county. Walla Walla County is the twenty-first most populated county in Washington, with an average population density of 49.7 people per square mile in 2023 compared to a statewide average of 119.6 people per square mile (Washington OFM 2023a; U.S. Census Bureau 2023a).

Total population in Walla Walla County increased by an estimated 2,600 people or 4.4 percent between 2014 and 2023, an increase below the state average of 13.5 percent (Table 1). More people moved to than from Walla Walla County over this period, with net in-migration accounting for all the population gain over this period, as the number of deaths exceeded the number of births, resulting in natural decrease (Washington OFM 2023b). The growth in population was concentrated in incorporated areas, as the total number of residents in unincorporated Walla Walla County decreased over this period (Table 1).

Across the Columbia River in Oregon, Morrow County had an estimated population of 12,300 in 2022 (Table 2).<sup>4</sup> Almost two-thirds of the population (65 percent) lived in one of five incorporated communities, with half of the total living in either Boardman (33 percent) or Irrigon (17 percent). Morrow County had an average population density of 6.2 people per square mile in 2022 compared to a statewide average of 44.6 people per square mile (Portland State University [PSU] 2023a; U.S. Census Bureau 2023a).

Total population in Morrow County increased by an estimated 890 people or 7.8 percent between 2013 and 2022, an increase slightly below the state average of 9.3 percent (Table 2). Migration accounted for the majority (87.8 percent) of statewide population growth in Oregon between 2013 and 2022, with natural increase accounting for the remaining 12.2 percent. Migration played a smaller role in Morrow County, accounting for approximately 57 percent of population growth over this period, with natural increase accounting for the remaining 43 percent (PSU 2014b, 2021, 2023b).

Umatilla County had an estimated population of 80,400 in 2022 (Table 2). Almost three-quarters of the population (73 percent) lived in one of 12 incorporated communities. Hermiston and Pendleton were the largest communities by population accounting for 25 percent and 21 percent of the county total, respectively. Umatilla County had an average population density of 25.0 people per square mile in 2022 compared to a statewide average of 44.6 people per square mile (PSU 2023a; U.S. Census Bureau 2023a).

			2013 to 2022		
Geographic Area	2013	2022	Net Change	Percent Change	Annual Growth Rate (Percent)
Morrow County <sup>1/</sup>	11,425	12,315	890	7.8	0.8
Boardman	3,405	4,116	711	20.9	1.9
Heppner	1,290	1,182	-108	-8.4	-0.9
lone	330	343	13	3.9	0.4
Irrigon	1,835	2,067	232	12.6	1.2
Lexington	255	238	-17	-6.7	-0.7
Unincorporated	4,310	4,369	59	1.4	0.1
Umatilla County <sup>2/</sup>	77,895	80,401	2,506	3.2	0.3
Adams	370	397	27	7.3	0.7
Athena	1,125	1,211	86	7.6	0.7
Echo	700	652	-48	-6.9	-0.7
Helix	190	192	2	1.1	0.1
Hermiston	17,240	19,973	2,733	15.9	1.5
Pendleton	16,780	16,894	114	0.7	0.1
Pilot Rock	1,505	1,326	-179	-11.9	-1.3

### Table 2. Population in Oregon Counties and Incorporated Communities in the Socioeconomic Study Area

 $<sup>^{\</sup>rm 4}$  2022 is the most current year that these data are available for Oregon (PSU 2023a).

			2013 to 2022			
Geographic Area	2013	2022	Net Change	Percent Change	Annual Growth Rate (Percent)	
Stanfield	2,095	2,239	144	6.9	0.7	
Umatilla	7,025	7,632	607	8.6	0.8	
Other Incorporated	7,970	8,100	130	1.6	0.2	
Unincorporated	22,895	21,785	-1,110	-4.8	-0.5	
Oregon State	3,919,020	4,281,851	362,831	9.3	0.9	

Source: PSU 2014a, 2023a

1/ All five incorporated communities in Morrow County are within an approximately one-hour commute from the Facility.

2/ Nine of the 12 incorporated communities in Umatilla County are an approximately one-hour commute from the Facility site; the other three, not included here (Milton-Freewater, Ukiah, and Weston), are more than one hour away.

Total population in Umatilla County increased by an estimated 2,500 people or 3.2 percent between 2013 and 2022, an increase below the state average of 9.3 percent (Table 2). Umatilla County experienced both natural increase and net in-migration over this period, with natural increase accounting for 53 percent of the increase and migration accounting for the remaining 47 percent (PSU 2014b, 2021, 2023b).

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

The Washington OFM prepares county population projections for planning under Washington state's Growth Management Act (GMA). High-, medium- and low-growth expectations are prepared for each county, with the medium series considered the most likely because it is based on assumptions that have been validated with past and current information (Washington OFM 2022). Current projections developed in support of the GMA extend through 2040, with supplemental projections developed from 2040 through 2050 to provide additional data for counties. In Oregon, the PSU Population Research Center (PRC) produces projections under the Oregon Population Forecast Program for the population of Oregon counties and Urban Growth Boundary areas over a 50-year time horizon (PSU 2023c).

The Facility is expected to have an operational life of 35 years, which would extend slightly beyond the available Washington population projections. However, projections are available through 2050 and provide useful insight into anticipated population growth over the operational life of the Facility. Population is projected to continue grow from 2020 through 2050 in the study area counties In Washington, as well as statewide (Table 3).

From 2020 to 2025, population was projected to increase by 7 percent and 9 percent in Benton and Franklin counties, respectively, and 2 percent in Walla Walla County compared to a statewide average of 5 percent. Population is also projected to increase at a faster rate in Franklin County from 2020 to 2050, with a projected increase of about 56 percent (54,200 people), compared to smaller relative increases of 40 percent (82,000 people) in Benton County, 8 percent (5,100 people) in Walla Walla County, and 29 percent (2.2 million people) statewide (Table 3).

Geographic Area	2020	2025	2030	2040	2050
Benton County	206,873	220,889	235,177	262,587	288,887
Franklin County	96,749	105,837	114,907	132,930	150,970
Walla Walla County	62,584	63,714	64,977	66,695	67,645
Washington State	7,706,310	8,100,384	8,502,764	9,248,473	9,937,575

#### Table 3. Population Projections for Washington Counties in the Socioeconomic Study Area, 2020 to 2050

Source: Washington OFM 2022a Note:

1/ Data for 2020 are federal census counts for that year. The remaining numbers are medium-growth projections developed by the Washington OFM.

Population is also projected to continue grow from 2020 through 2050 in the study area counties In Oregon (Table 4). From 2020 to 2025, population was projected to increase by 2.9 percent and 2.7 percent in Morrow and Umatilla counties, respectively. From 2020 to 2050, population is projected to increase by 12.3 percent (1,500 people) in Morrow County and 15.0 percent in Umatilla County (12,200 people) (Table 4).

	Table 4.	Population Projections for Oregon Co	unties in the Socioeconomic Stud	v Area, 2020 to 2050
--	----------	--------------------------------------	----------------------------------	----------------------

Geographic Area	2020	2025	2030	2040	2050
Morrow County	12,186	12,538	12,846	13,103	13,317
Umatilla County	80,075	82,267	84,745	86,947	88,881

Source: PSU 2023d

1/ Data for 2020 are federal census counts for that year. The remaining numbers are projections developed by PSU.

### c) Numbers and percentages describing the race/ethnic composition of the cities and counties in the study area.

According to the most recent Census estimates, slightly more than two-thirds (66.5 percent) of the population of Washington state is White alone. Persons of Hispanic or Latino origin were identified as the single largest minority group, accounting for 13.2 percent of the total population (Table 5). A similar share of the total population in Benton County was identified as White (68.5 percent), with persons of Hispanic or Latino origin accounting for a much larger share than the statewide average (23.0 percent compared to 13.2 percent) (Table 5). The majority of the population in four of the incorporated communities in Benton County was White alone, with White populations ranging from 55.3 percent (Benton City) to 76.1 percent (Richland). In Prosser, the other incorporated community in Benton County, less than half of the population (41.7 percent) was identified as White, with persons of Hispanic or Latino origin accounting for more than half (55.0 percent) of the total (Table 5).

Less than half (39.1 percent) of the population in Franklin County was identified as White in the most recent Census estimates, with persons of Hispanic or Latino origin accounting for an estimated 53.6 percent of the total. In Pasco, the largest city in Franklin County, the corresponding totals were 36.8 percent (White) and 55.5 percent (Hispanic or Latino) (Table 5).

Similar to Benton County, in Walla Walla County, a majority (70.6 percent) of the population was identified as White, with persons of Hispanic or Latino origin accounting for an estimated 22.0 percent of the total (Table 5).

		Percent of Total					
Geographic Area	Total Population <sup>1/</sup>	White <sup>2/</sup>	Hispanic or Latino <sup>2/</sup>	American Indian and Alaska Native <sup>2/</sup>	Other Race <sup>2/3/</sup>	Two or More Races²	
Benton County	204,551	68.5	23.0	0.5	4.9	3.1	
Benton City	3,435	55.3	42.3	1.5	0.2	0.6	
Kennewick	83,082	62.7	29.4	0.5	4.4	3.0	
Prosser	6,061	41.7	55.0	0.0	3.3	0.0	
Richland	59,718	76.1	12.4	0.3	7.8	3.4	
West Richland	15,988	75.7	14.7	0.3	3.2	6.1	
Franklin County	95,313	39.1	53.6	0.2	4.4	2.7	
Mesa	729	8.6	86.4	0.0	2.2	2.7	
Pasco	76,398	36.8	55.5	0.2	4.6	2.9	
Walla Walla County	62,168	70.6	22.0	0.3	3.5	3.6	
College Place	9,739	77.2	16.1	0.2	2.4	4.0	
Walla Walla	33,765	66.1	24.2	0.4	4.9	4.4	
Washington	7,617,364	66.5	13.2	0.9	13.6	5.8	

### Table 5. Race and Ethnicity in Washington Counties and Incorporated Communities in the Socioeconomic Study Area, 2021

Source: U.S. Census Bureau 2023b

1/ Estimates are annual totals developed as part of the 2017-2021 American Community Survey 5-Year Estimates.

2/ Non-Hispanic only. The federal government considers race and Hispanic/Latino origin to be two separate and distinct concepts. People identifying as

Hispanic or Latino origin may be of any race. The data summarized in this table present Hispanic/Latino as a separate category.

3/ The "Other Race" category presented here includes census respondents identifying as Black or African American, Asian, Native Hawaiian and Other Pacific Islander, or Some Other Race.

According to the most recent Census estimates, almost three-quarters (74.1 percent) of the population of Oregon state is White alone. Persons of Hispanic or Latino origin were identified as the single largest minority group, accounting for 13.6 percent of the total population (Table 6). A smaller share of the total population in Morrow County was identified as White (57.7 percent), with persons of Hispanic or Latino origin accounting for a much larger share than the statewide average (37.8 percent compared to 13.8 percent) (Table 6). The majority of the populations ranging from 55.7 percent (Irrigon) to 95.2 percent (Lexington). In Boardman, the other incorporated community in Morrow County, less than one-third of the population (29.4 percent) was identified as White, with persons of Hispanic or Latino origin accounting for more than two-thirds (66.9 percent) of the total (Table 6).

Almost two-thirds (64.0 percent) of the population in Umatilla County was identified as White, with persons of Hispanic or Latino origin accounting for an estimated 27.8 percent of the total. The estimated White share of the population in the nine communities in Umatilla County within one hour of the Facility ranged from 44 percent in Hermiston to about 93 percent in Athena and Pilot Rock. Persons of Hispanic or Latino origin comprised relatively large shares of the total population in those Umatilla County communities where smaller shares of the population were White (e.g., Hermiston, Stanfield, and Umatilla) (Table 6).

Notes:

		Percent of Total					
Geographic Area	Total Population	White <sup>2/</sup>	Hispanic or Latino <sup>2/</sup>	American Indian and Alaska Native <sup>2/</sup>	Other Race <sup>2/,3/</sup>	Two or More Races²/	
Morrow County	11,964	57.7	37.8	0.3	1.6	2.5	
Boardman	3,748	29.4	66.9	0.0	2.5	1.1	
Heppner	1,214	89.6	5.7	0.0	1.1	3.6	
lone	404	79.2	11.6	0.0	4.7	4.5	
Irrigon	1,993	55.7	37.5	1.7	1.8	3.3	
Lexington	145	95.2	0.0	0.0	0.0	4.8	
Umatilla County	79,509	64.0	27.8	2.6	2.2	3.4	
Adams	484	86.0	1.4	7.6	2.3	2.7	
Athena	1,307	93.0	4.9	0.5	0.0	1.6	
Echo	572	83.9	7.9	0.0	0.0	8.2	
Helix	262	63.0	6.5	0.0	0.0	30.5	
Hermiston	19,141	44.0	51.1	0.4	1.4	3.2	
Pendleton	16,861	78.4	12.0	2.1	3.4	4.2	
Pilot Rock	1,193	93.1	2.4	1.7	0.0	2.8	
Stanfield	2,290	52.6	41.4	1.1	0.1	4.8	
Umatilla	7,224	47.8	44.1	0.9	4.3	2.9	
Oregon	4,207,177	74.1	13.6	0.8	6.9	4.7	

### Table 6. Race and Ethnicity in Oregon Counties and Incorporated Communities in the Socioeconomic Study Area, 2021

Source: U.S. Census Bureau 2023b

Notes:

1/ Estimates are annual totals developed as part of the 2017-2021 American Community Survey 5-Year Estimates.

2/ Non-Hispanic only. The federal government considers race and Hispanic/Latino origin to be two separate and distinct concepts. People identifying as

Hispanic or Latino origin may be of any race. The data summarized in this table present Hispanic/Latino as a separate category.

3/ The "Other Race" category presented here includes census respondents identifying as Black or African American, Asian, Native Hawaiian and Other Pacific Islander, or Some Other Race.

# d) Aggregate per capita and household incomes, including the number and percentages of the population below the poverty level for the cities and counties within the study area.

Income and poverty data are summarized for the Washington counties, incorporated communities, and Washington state in Table 7. Per capita and median household incomes were below the state averages in all three counties. This was also the case for all the incorporated communities within an approximately one-hour commute of the Facility area in Washington, with the exceptions of Richland and West Richland in Benton County (Table 7).

The estimated share of households below the poverty level in Washington state was 10.0 percent in 2021. The corresponding rates in all three counties were similar (Benton County) or higher than the state average, with an estimated 15.1 percent and 11.1 percent of households below the poverty level in Franklin and Walla Counties, respectively. The share of households below the poverty level in the incorporated communities exceeded the state average (10 percent) in all but two cases (Richland

and West Richland). Shares above the state average ranged from 10.3 percent (College Place) to 39.7 percent (Mesa) (Table 7).

	Per capita	income <sup>1/,2/</sup>	Median house	hold income <sup>1/,2/</sup>	Pove	rty <sup>1/</sup>
Geographic Area	2021 Dollars	Percent of State Per Capita	2021 Dollars	Percent of State Median	Population Below Poverty Level	Percent Below Poverty Level
Benton County	36,640	84%	76,612	93%	21,371	10.6%
Benton City	18,797	43%	49,068	60%	510	15.1%
Kennewick	31,468	72%	64,053	78%	11,498	14.1%
Prosser	27,396	63%	60,927	74%	1,130	18.6%
Richland	44,261	101%	83,066	101%	4,798	8.1%
West Richland	39,690	91%	109,209	133%	922	5.8%
Franklin County	27,838	64%	72,452	88%	13,939	15.1%
Mesa	15,047	34%	70,781	86%	283	39.7%
Pasco	27,344	62%	70,486	86%	11,617	15.4%
Walla Walla County	31,615	72%	63,686	77%	6,334	11.1%
College Place	28,933	66%	56,442	68%	906	10.3%
Walla Walla	28,212	64%	55,648	68%	4,013	13.5%
Washington State	43,817	100%	82,400	100%	746,904	10.0%

Table 7.	Income and Poverty in Washington Counties and Incorporated Communities in the
	Socioeconomic Study Area, 2021

Source: U.S. Census Bureau 2023c, 2023d, 2023e

Notes:

1/ Estimates are annual totals developed as part of the 2017-2021 American Community Survey 5-Year Estimates.

2/ Per capita and median household income estimates are in 2021 inflation-adjusted dollars.

Income and poverty data are summarized for the Oregon counties, incorporated communities, and Oregon state in Table 8. Per capita and median household incomes were below the Oregon state averages in both Morrow and Umatilla counties. This was also the case for all the incorporated communities in Oregon within an approximately one-hour commute of the Facility area, with the exceptions of Ione and Helix in Morrow and Umatilla counties, respectively (Table 8).

The estimated share of households below the poverty level in Oregon state was 12.1 percent in 2021. The corresponding rates in both counties were higher than the state average, with an estimated 14.8 percent and 12.8 percent of households below the poverty level in Morrow and Umatilla counties, respectively. The share of households below the poverty level in 6 of the 14 incorporated communities in Oregon within an approximately one-hour commute of the Facility area exceeded the state average (12.1 percent). Overall, the population below the poverty level in the incorporated communities in Oregon ranged from 4.6 percent (Athena) to 20.2 percent (Heppner) of the total (Table 8).

Per capita income <sup>1/,2/</sup>		Median house	hold income <sup>1/,2/</sup>	Poverty <sup>1/</sup>		
Geographic Area	2021 Dollars	Percent of State Per Capita	2021 Dollars	Percent of State Median	Population Below Poverty Level	Percent Below Poverty Level
Morrow County	28,223	75%	61,659	88%	1,764	14.8%
Boardman	20,932	55%	61,442	88%	605	16.1%
Heppner	25,367	67%	42,022	60%	240	20.2%
lone	46,876	124%	70,714	101%	42	10.4%
Irrigon	26,351	70%	64,375	92%	384	19.3%
Lexington town	22,278	59%	36,875	53%	12	8.3%
Umatilla County	27,140	72%	63,123	90%	9,606	12.8%
Adams	24,387	64%	55,313	79%	24	5.0%
Athena	29,890	79%	66,339	95%	57	4.6%
Echo	31,154	82%	63,512	91%	55	9.6%
Helix	39,792	105%	141,250	202%	15	5.7%
Hermiston	24,896	66%	60,971	87%	2,527	13.3%
Pendleton	25,976	69%	58,093	83%	2,351	15.5%
Pilot Rock	30,008	79%	63,302	90%	56	4.7%
Stanfield	24,310	64%	57,264	82%	226	9.9%
Umatilla	19,597	52%	51,790	74%	894	17.1%
Oregon State	37,816	100%	70,084	100%	498,517	12.1%

### Table 8. Income and Poverty in Oregon Counties and Incorporated Communities in the Socioeconomic Study Area, 2021

Source: U.S. Census Bureau 2023c, 2023d, 2023e

Notes:

1/ Estimates are annual totals developed as part of the 2017-2021 American Community Survey 5-Year Estimates.

2/ Per capita and median household income estimates are in 2021 inflation-adjusted dollars.

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

As indicated in Part 3, Section 15 of the ASC, construction and operation of the Facility is not expected to displace or otherwise affect existing or future housing, including housing for minority or low-income populations.

# 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.

Average annual workforce, employment, and unemployment data are summarized for the five counties and the states of Washington and Oregon in Table 9. The average annual unemployment rate was 4.2 percent in both Washington and Oregon in 2022. Viewed by county, the corresponding rates ranged from 4.1 percent (Morrow County) to 6.2 percent (Franklin County) (Table 9).

Geographic Area	Civilian Labor Force	Employed	Unemployed	Unemployment Rate (%)
Benton County	106,236	100,878	5,358	5.0
Franklin County	44,261	41,534	2,727	6.2
Walla Walla County	30,723	29,306	1,417	4.6
Washington State	3,990,343	3,822,319	168,024	4.2
Morrow County	5,997	5,750	247	4.1
Umatilla County	38,062	36,310	1,752	4.6
Oregon State	2,176,734	2,085,939	90,795	4.2

#### Table 9. Average Annual Workforce, 2022

Sources: BLS 2023a, Oregon Employment Department 2023, Washington Employment Security Department 2023

Summary employment data are presented by economic sector for the five counties and the states of Washington and Oregon in Table 10. An estimated 116,401 people were employed in Benton County in 2021. Healthcare and social assistance was the largest economic sector based on employment, accounting for about 13.4 percent of total employment, followed by the retail trade sector, which accounted for 11.1 percent (Table 10). In Franklin County, an estimated 44,558 people were employed in the county in 2021. Government was the largest sector by employment, accounting for 15.7 percent of total employment (Table 6). An estimated 37,606 people were employed in Walla Walla County in 2021. Government and healthcare and social assistance were the largest employers, accounting for 16.5 percent and 12.9 percent of total employment, respectively (Table 10).

An estimated 8,415 people were employed in Morrow County in 2021. Manufacturing and agriculture were the largest employers, accounting for 21.4 percent and 16.6 percent of total employment, respectively (Table 10). In Umatilla County, an estimated 40,085 people were employed in the county in 2021. The government sector was the largest employer, accounting for 17.8 percent of total employment (Table 10).

Economic Sector	Benton County	Franklin County	Walla Walla County	Washing- ton State	Morrow County	Umatilla County	Oregon State
Total Employment <sup>1/</sup>	116,401	44,558	37,606	4,558,011	8,415	40,085	2,559,454
Percent of Total <sup>2/</sup>							
Agriculture	4.3	9.0	9.4	2.0	16.6	9.6	2.7
Forestry, fishing, and hunting	(D)	(D)	(D)	0.9	(D)	3.3	1.3
Mining	(D)	(D)	(D)	0.1	(D)	0.2	0.2
Utilities	0.1	(D)	0.4	0.1	1.2	0.5	0.2
Construction	8.0	8.1	4.7	6.3	1.6	4.5	5.9
Manufacturing	4.3	8.0	12.0	6.1	21.4	8.0	7.9
Wholesale trade	1.4	4.9	2.5	3.1	1.6	2.5	3.2
Retail trade	11.1	9.9	8.3	10.6	4.4	10.6	10.1
Transportation & warehousing	2.6	(D)	2.1	4.8	2.4	7.1	4.8
Information	0.7	0.4	0.9	3.7	(D)	1.6	1.7

#### Table 10. Employment by Economic Sector, 2021

Economic Sector	Benton County	Franklin County	Walla Walla County	Washing- ton State	Morrow County	Umatilla County	Oregon State
Finance and insurance	3.6	2.0	3.2	4.2	0.9	2.5	4.0
Real estate, rental and leasing	3.6	3.5	3.5	4.9	2.1	3.2	4.9
Professional, scientific, and technical services	9.3	(D)	(D)	7.8	(D)	2.3	6.9
Management of companies and enterprises	0.5	(D)	(D)	1.1	(D)	0.3	2.0
Administrative and waste management services	10.2	3.6	2.5	4.9	3.6	2.9	5.1
Educational services	1.1	1.0	3.9	1.7	0.1	0.3	1.9
Healthcare and social assistance	13.4	8.7	12.9	11.0	4.0	11.3	12.1
Arts, entertainment, and recreation	1.6	1.3	2.0	2.0	(D)	0.9	2.3
Accommodation and food services	7.2	5.2	5.8	5.9	(D)	6.4	6.8
Other services (except public administration)	4.4	5.0	4.4	4.7	2.6	4.3	4.9
Government	10.8	15.7	16.5	14.1	12.4	17.8	11.3

#### Table 10. Employment by Economic Sector, 2021

Source: U.S. Bureau of Economic Analysis 2022

(D) Not shown to avoid disclosure of confidential information; estimates for these items are, however, included in the totals.

1/ Employment estimates include self-employed individuals. Employment data are by place of work, not place of residence, and, therefore, include people who work in the area but do not live there. Employment is measured as the average annual number of jobs, both full- and part-time, with each job counted at full weight.

2/ Percentages for Benton, Franklin, Walla Walla, and Morrow counties do not sum to 100 because employment counts are not provided for some sectors to avoid disclosing confidential information (identified by [D] in the table).

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

The Applicant intends for the Facility to have a Commercial Operations Date as early as December 31, 2026. To meet this schedule, it is anticipated that construction would begin in Q4 of 2025, with construction expected to require approximately 12 to 18 months to complete. Figure 1 shows the estimated average on-site construction workforce by month assuming a 12-month schedule. On-site construction employment would generally follow a bell-shaped curve, with monthly average employment ranging from 5 on-site workers in month 1 to 105 workers in month 7. On-site employment would gradually decrease following the peak, with an estimated 7 workers employed in month 12, the final month of construction. An estimated monthly average of 59 construction workers would be employed on-site over the 12-month construction period.



#### Figure 1. Estimated Average On-Site Construction Workforce by Month

The expected life of the Facility is assumed to be 35 years. However, depending on the commercial market for renewable energy, the Facility could be updated with more efficient components over time which could extend its useful life. The Applicant anticipates that five workers would be employed part-time during operation. Workers employed on-site are expected to include two part-time electricians and three part-time vegetation contractors. No full-time operation positions are anticipated.

#### 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.

The Applicant anticipates that approximately half of the on-site construction workforce would be hired locally to the extent workers are available, with an estimated 50 percent of the workforce expected to already reside within a one-hour commute of the Facility Area. Based on this estimate, for this analysis we assume that the local workforce employed on-site would peak with an estimated 53 local workers employed on-site at one time.

Review of occupational data for the two Washington MSAs within one hour indicates that the area has a large construction workforce pool. Representative occupational employment estimates for the disciplines required to construct the Facility are presented for the Kennewick-Richland and Walla Walla MSAs in Table 11. In addition to total employment, Table 11 also provides mean hourly and annual wage data. These data suggest that the existing construction workforce should be sufficient to meet the peak estimated Facility-related demand for construction workers. Overall, more than 7,000 workers are currently employed in the required labor disciplines, with most of these workers employed in the Kennewick-Richland MSA (Benton and Franklin counties) (Table 11). These estimates cover wage and salary workers in nonfarm establishments and do not include the self-employed or owners and partners in unincorporated firms, which could be another potential source of construction labor for the Facility. Further, additional construction workers are available in Morrow and Umatilla counties, which are part of the Eastern Oregon nonmetropolitan area.<sup>5</sup> An estimated 2,900 workers were employed in the identified occupations in the Eastern Oregon nonmetropolitan area in 2022, some of whom may be available to work on the Facility (BLS 2023b).

### Table 11. Existing Construction Workforces in the Kennewick-Richland and Walla Walla MSAs by Occupation, 2022

		Kennev	vick-Richla	nd MSA	Walla Walla MSA		
SOC CODE	Labor Discipline	Total Employ- ment	Mean Hourly Wage	Mean Annual Wage	Total Employ- ment	Mean Hourly Wage	Mean Annual Wage
11-9021	Construction Managers	270	57.65	119,910	30	48.04	99,920
47-2031	Carpenters	1,160	33.58	69,850	200	27.06	56,280
47-2061	Construction Laborers	1,480	26.06	54,200	110	22.88	47,590
47-2073	Operating Engineers and Other Construction Equipment Operators	410	35.47	73,780	70	32.71	68,040
47-2111	Electricians	880	41.34	86,000	110	32.37	67,330
47-2221	Structural Iron and Steel Workers	60	40.83	84,920	na	na	na
49-9051	Electrical Power-Line Installers and Repairers	130	53.07	110,380	50	45.98	95,640
53-3032	Heavy and Tractor-Trailer Truck Drivers	1,950	28.67	59,640	240	25.01	52,030

Source: BLS 2023b

Notes:

SOC – standard occupational classification; na – not available

1/ Data are for May 2022, the most current data available.

2/ The Kennewick-Richland MSA consists of Benton and Franklin counties, Washington. The Walla Walla MSA consists of Walla Walla County, Washington. 3/ Mean hourly and annual wage estimates represent wages and salaries only, and do not include employee bonuses or nonwage costs to the employer, such as health insurance or employer contributions to retirement plans.

#### i) A list of the required trades for the proposed project construction.

Trades required during the construction phase of the Facility include:

- Construction managers and supervisors
- Construction laborers
- Equipment operators
- Electricians
- Mechanical Installers (typically iron workers or carpenters)
- Linesmen
- Truck drivers

The corresponding occupational categories are identified above in Table 11.

<sup>&</sup>lt;sup>5</sup> The Eastern Oregon nonmetropolitan area consists of Morrow and Umatilla counties, along with six other eastern Oregon counties: Baker County, Grant County, Harney County, Malheur County, Union County, and Wallowa County. Only a portion of the workforce in this region is presently employed within one-hour of the Project.

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

The Applicant anticipates that five workers would be employed part-time during operation. Workers employed on-site are expected to include two part time electricians and three part time vegetation contractors. No full-time operation positions are anticipated. These workers and their families are likely to reside within daily commuting distance and will either already reside in the area or permanently relocate. The average U.S. family household consisted of 3.13 people per family in 2022 (U.S. Census Bureau 2022). Assuming that five workers would relocate to the area and applying this average family household size would result in about 16 people permanently relocating to the Facility vicinity during Facility operation.

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

Workers hired locally (i.e., within the five counties within one-hour of the Facility) would commute daily between the Facility and their normal place of residence. During construction, for this analysis we assume that an estimated peak of 53 local workers would commute daily to the Facility site (see Section (h) above). Based on the existing distribution of population in the study area counties, the majority of these workers would likely normally reside in the larger cities of Kennewick, Richland, Pasco, and Walla Walla (see Table 1).

The remainder of the estimated construction workforce (with an estimated peak of 53 workers) would be non-local and would temporarily relocate to the vicinity of the Facility for the duration of their employment. The majority of these workers would likely seek temporary accommodation in the larger nearby communities, where much of this type of accommodation is located (see Section 4.2, Housing Impacts, subsection (a), below). These workers would commute daily between the Facility and their temporary place of residence.

During operations, an estimated five workers would commute to and from the Facility on a part-time basis.

### 4.2 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

Housing resources are summarized by city, county, and state in Tables 12 and 13. The data presented in these tables are annual estimates for 2021 prepared by the U.S. Census Bureau using 5 years of data (2017 to 2021) (U.S. Census Bureau 2023f). The U.S. Census Bureau defines a housing unit as a house, apartment, mobile home or trailer, group of rooms, or single room occupied or intended to be occupied as separate living quarters. There were an estimated 79,020 housing units in Benton County in 2021, with the cities of Kennewick and Richland together accounting for almost three-quarters of the total, 41 percent and 31 percent, respectively (Table 12). An estimated total of 4,730 units were vacant in Benton County in 2021, approximately 6.0 percent of the total. Median values for owneroccupied homes were below the state median ranging from about \$191,700 in Benton City to about \$322,200 in West Richland. Median rent for renter-occupied units ranged from \$877 (Benton City) to more than \$1,300 (West Richland).

Franklin County had an estimated total of 29,194 housing units in 2021, with the city of Pasco accounting for 82 percent of the total (Table 12). An estimated 1,473 or 5.0 percent of all housing units were vacant in Franklin County in 2021. Median values for owner-occupied homes were lower than in adjacent Benton County, with a county-wide median of \$254,300 compared to a Benton County median of \$283,400. Median rent for renter-occupied units in Franklin County was \$977, slightly lower than the median in Benton County (\$1,085) (Table 12).

	Total	Occupied	Vacant	Housing	Median	Median
Geographic Area	Housing Units	Housing Units	Number of Units	Percent of Total	Home Value (dollars)	Gross Rent (dollars)
Benton County	79,020	74,290	4,730	6.0%	283,400	1,085
Benton City	1,172	1,126	46	3.9%	191,700	877
Kennewick	32,279	30,382	1,897	5.9%	262,400	1,026
Prosser	2,419	2,272	147	6.1%	210,100	866
Richland	24,730	23,335	1,395	5.6%	311,000	1,194
West Richland	5,335	5,058	277	5.2%	322,200	1,365
Franklin County	29,194	27,721	1,473	5.0%	254,300	977
Mesa	145	145	0	0.0%	99,200	833
Pasco	23,921	22,838	1,083	4.5%	250,500	993
Walla Walla County	24,855	22,842	2,013	8.1%	277,300	1,009
College Place	3,643	3,388	255	7.0%	249,800	916
Walla Walla	13,839	12,583	1,256	9.1%	262,600	1,089
Washington State	3,170,695	2,931,841	238,854	7.5%	397,600	1,439

Table 12.	Housing Characteristics in Washington Counties and Incorporated Communities in the
	Socioeconomic Study Area, 2021

Source: U.S. Census Bureau 2023f

Note:

1/ Estimates are annual totals developed as part of the 2017-2021 American Community Survey 5-Year Estimates.

Walla Walla County had an estimated total of 24,855 housing units in 2021. The city of Walla Walla accounted for more than half (56 percent) of the total, with 15 percent located in the city of College Place (Table 12). An estimated 2,013 or 8.1 percent of housing units were vacant in Walla Walla County in 2021. County-wide, the median value for owner-occupied homes was \$277,300 and the median rent for renter-occupied units was \$1,009 (Table 12).

In Oregon, Morrow County had an estimated total of 4,671 housing units in 2021, with 586 or 12.5 percent of the total estimated to be vacant (Table 13). County-wide, the median value for owneroccupied homes was less than half the state median, \$169,800 compared to \$362,200, and the median rent for renter-occupied units was \$727 (Table 13). Umatilla County had an estimated total of 30,930 housing units in 2021, with 3,918 or 12.7 percent of the total estimated to be vacant (Table 13). County-wide, the median value for owner-occupied homes was \$203,800 and the median rent for renter-occupied units was \$854 (Table 13).

	Total	Occupied	Vacant	Housing	Median	Median	
Geographic Area	Housing Housing Units Units		Number of Percent of Units Total		Home Value (dollars)	Gross Rent (dollars)	
Morrow County	4,671	4,085	586	12.5%	169,800	727	
Boardman	1,180	1,109	71	6.0%	141,600	713	
Heppner	634	520	114	18.0%	131,800	619	
lone	192	178	14	7.3%	116,900	1,007	
Irrigon	765	698	67	8.8%	138,600	649	
Lexington	68	66	2	2.9%	145,000	na	
Umatilla County	30,930	27,012	3,918	12.7%	203,800	854	
Adams	182	161	21	11.5%	182,500	710	
Athena	584	535	49	8.4%	141,000	787	
Echo	239	209	30	12.6%	144,900	842	
Helix	136	102	34	25.0%	185,800	na	
Hermiston	6,796	6,423	373	5.5%	193,800	885	
Pendleton	6,843	5,876	967	14.1%	206,100	853	
Pilot Rock	562	502	60	10.7%	125,900	891	
Stanfield	937	869	68	7.3%	141,900	1,019	
Umatilla	2,044	1,864	180	8.8%	156,000	872	
Oregon	1,798,864	1,658,091	140,773	7.8%	362,200	1,250	

#### Table 13. Housing Characteristics in Oregon Counties and Incorporated Communities in the Socioeconomic Study Area, 2021

Source: U.S. Census Bureau 2023f

Notes:

na – not available

1/ Estimates are annual totals developed as part of the 2017-2021 American Community Survey 5-Year Estimates.

The number of housing units has increased statewide in Washington and in all three counties over the last decade (since 2012), with net gains of about 10,100 units (14.7 percent), 4,600 units (18.7 percent), and 1,400 units (6.0 percent) in Benton, Franklin, and Walla Walla counties, respectively (Table 14). Viewed by community, the largest absolute increase (5,300 units) was in Pasco, followed by Richland (3,900 units) and Kennewick (3,500 units) (Table 14).

#### Table 14. Number of Housing Units in Washington Counties and Incorporated Communities in the Socioeconomic Study Area, 2012 and 2021

			201	2 to 2021	
Geographic Area	2012	2021	Net Change	Percent Change	
Benton County	68,896	79,020	10,124	14.7%	
Benton City	1,249	1,172	-77	-6.2%	
Kennewick	28,760	32,279	3,519	12.2%	
Prosser	2,293	2,419	126	5.5%	

			2012 to 2021	
Geographic Area	2012	2021	Net Change	Percent Change
Richland	20,860	24,730	3,870	18.6%
West Richland	4,282	5,335	1,053	24.6%
Franklin County	24,585	29,194	4,609	18.7%
Mesa	126	145	19	15.1%
Pasco	18,574	23,921	5,347	28.8%
Walla Walla County	23,446	24,855	1,409	6.0%
College Place	3,595	3,643	48	1.3%
Walla Walla	12,944	13,839	895	6.9%
Washington	2,884,186	3,170,695	286,509	9.9%

Sources: U.S. Census Bureau 2013, 2023f Note:

1/ Estimates are annual totals developed as part of the ACS 5-Year Estimates.

The number of housing units increased in Oregon over the same period. The numbers of units in Morrow and Umatilla counties increased by 5.0 percent and 4.1 percent, respectively, from 2012 to 2021 (Table 15). While the larger communities saw net gains in housing units over this period, the ACS estimates that the number of housing units decreased in some of the small Oregon communities within a one-hour commute of the Facility (Table 15).

#### Table 15. Number of Housing Units in Oregon Counties and Incorporated Communities in the Socioeconomic Study Area, 2012 and 2021

			2012 to 2021	
Geographic Area	2012	2021	Net Change	Percent Change
Morrow County	4,448	4,671	223	5.0%
Boardman	1,016	1,180	164	16.1%
Heppner	739	634	-105	-14.2%
lone	157	192	35	22.3%
Irrigon	734	765	31	4.2%
Lexington	114	68	-46	-40.4%
Umatilla County	29,707	30,930	1,223	4.1%
Adams	137	182	45	32.8%
Athena	473	584	111	23.5%
Echo	250	239	-11	-4.4%
Helix	81	136	55	67.9%
Hermiston	6,386	6,796	410	6.4%
Pendleton	6,569	6,843	274	4.2%
Pilot Rock	609	562	-47	-7.7%
Stanfield	804	937	133	16.5%
Umatilla	1,697	2,044	347	20.4%
Oregon	1,673,593	1,798,864	125,271	7.5%

Sources: U.S. Census Bureau 2013, 2023f

Note:

1/ Estimates are annual totals developed as part of the ACS 5-Year Estimates.

Rental housing resources are summarized in Tables 16 and 17. Viewed by county, these estimates suggest that rental housing is available in all three Washington counties, with almost 1,300 units available for rent in Benton County, mostly in Kennewick and Richland, 210 units available in Franklin County, and almost 600 units available in Walla Walla County. Additional units classified for seasonal, recreational, or occasional use may also be available in all three Washington counties, with about 50 units available in Morrow County and 515 units available in Umatilla County. Additional units classified for seasonal, recreational, or occasional use may also be available in the two Oregon counties, with about 50 units available in Morrow County and 515 units available in Umatilla County. Additional units classified for seasonal, recreational, or occasional use may also be available in these counties (Table 17). Rental housing options may also include other special living situations, such as Airbnb units and spare bedrooms in homes that residents would be willing to rent to construction workers. These types of potential housing opportunities are not included in the data presented in Tables 16 and 17.

Table 16.	Rental Housing in Washington Counties and Incorporated Communities in the Socioeconomic
	Study Area, 2021

Geographic Area	Total Vacant Housing Units <sup>1/</sup>	Rental Vacancy Rate <sup>1/</sup>	Units Available for Rent <sup>1/</sup>	Units for Seasonal, Recreational, or Occasional Use <sup>1/2/</sup>
Benton County	4,730	5.1%	1,281	638
Benton City	46	2.1%	5	16
Kennewick	1,897	6.3%	765	63
Prosser	147	2.0%	18	0
Richland	1,395	5.6%	493	382
West Richland	277	0.0%	0	51
Franklin County	1,473	2.4%	210	64
Mesa	0	0.0%	0	0
Pasco	1,083	2.3%	168	0
Walla Walla County	2,013	6.8%	582	195
College Place	255	7.9%	111	0
Walla Walla	1,256	7.9%	438	77
Washington	238,854	3.9%	43,690	86,590

Sources: U.S. Census Bureau 2023f, 2023g

1/ All data are annual estimates from the American Community Survey 5-year estimates for 2017-2021.

2/ Housing units for seasonal, recreational, or occasional use are generally considered to be vacation homes. They are not included in the estimated number of housing units shown here as available for rent.

Table 17.	Rental Housing in Oregon Counties and Incorporated Communities in the Socioeconomic Study
	Area, 2021

Geographic Area	Total Vacant Housing Units <sup>1/</sup>	Rental Vacancy Rate <sup>1/</sup>	Units Available for Rent <sup>1/</sup>	Units for Seasonal, Recreational, or Occasional Use <sup>1/2/</sup>
Morrow County	586	4.1%	49	208
Boardman	71	4.5%	25	31
Heppner	114	8.9%	24	35
lone	14	0.0%	0	0
Irrigon	67	0.0%	0	8

Geographic Area	Total Vacant Housing Units <sup>1/</sup>	Rental Vacancy Rate <sup>1/</sup>	Units Available for Rent <sup>1/</sup>	Units for Seasonal, Recreational, or Occasional Use <sup>1/2/</sup>
Lexington	2	0.0%	0	0
Umatilla County	3,918	5.4%	515	1,067
Adams	21	0.0%	0	0
Athena	49	0.0%	0	0
Echo	30	0.0%	0	0
Helix	34	0.0%	0	6
Hermiston	373	3.5%	92	24
Pendleton	967	8.3%	232	71
Pilot Rock	60	0.0%	0	9
Stanfield	68	7.9%	18	7
Umatilla	180	0.0%	0	0
Oregon	140,773	3.6%	23,247	58,181

Sources: U.S. Census Bureau 2023f, 2023g

1/ All data are annual estimates from the American Community Survey 5-year estimates for 2017-2021.

2/ Housing units for seasonal, recreational, or occasional use are generally considered to be vacation homes. They are not included in the estimated number of housing units shown here as available for rent.

Temporary housing is also available in the form of hotel and motel rooms. Data compiled by STR Global, a travel research firm, identified 43 hotels with a total of 3,845 guestrooms operating in Benton and Franklin counties in Washington in May 2023 (ECONorthwest 2023). The same data source also identified a total of 32 hotels operating in Morrow and Umatilla counties in Oregon, with a total of 1,974 guestrooms. STR Global compiles data for commercial lodging establishments with at least 15 rooms. They do not count single room occupancy hotels, most bed and breakfast inns, or short-term rentals, like Airbnb. Recent monthly average occupancy rates (from April 2022 to April 2023) in the above counties (Benton, Franklin, Morrow, and Umatilla counties), as reported by ECONorthwest, ranged from 45 percent in December to 77 percent in June. This suggests that during peak occupancy (June) an estimated average of 23 percent of the identified rooms, more than 1,300 rooms. would normally be vacant and available for rent.

Additional hotel and motel rooms are available in Walla Walla County in Washington. Also using data compiled from STR Global, VISIT Walla Walla (2019) identified 14 hotels in Walla Walla County in March 2019 with a total of 991 rooms. Recent monthly occupancy rates at that time (from March 2018 to March 2019), as reported by VISIT Walla Walla, ranged from about 31 percent in December to about 75 percent in June and September, suggesting that during peak occupancy (June/September) about 250 additional rooms would normally be vacant and available for rent.

Temporary accommodation in the study area also includes recreational vehicle (RV) parks and campsites. Facilities in Benton and Franklin counties within one hour of the Facility area include 16 RV parks and campgrounds, with an approximate total of 1,800 RV spaces. Parks and campgrounds in Benton and Franklin counties include locations in Kennewick, Richland, West Richland, Pasco, Prosser, and Benton City. An additional four RV parks and campgrounds, with a total of 270 spaces are located within one hour of the Facility area in Walla Walla County, including locations in Burbank and Walla Walla. South of the Columbia River in Oregon, RV parks and campgrounds in Morrow and

Umatilla counties within one hour of the Facility include 17 facilities, with a total of 970 spaces. Parks and campgrounds in Morrow and Umatilla counties include locations Boardman, Heppner, Irrigon, Hermiston, and Pendleton.<sup>6</sup>

#### 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.

Facility construction is expected to begin in Q4 of 2025 and require approximately 12 to 18 months to complete. Assuming a 12-month schedule, an estimated peak of 105 workers would be employed onsite at one time (Figure 1). For the purposes of analysis, the non-local share of the workforce is estimated to be 50 percent, with non-local workers expected to temporarily relocate to the vicinity of the Facility for the duration of their employment. As a result, an estimated peak total of 53 workers are expected to seek temporary accommodation in the Facility vicinity.

Non-local workers are expected to seek a range of temporary accommodations, including rental housing (houses, apartments, mobile homes), hotel/motel rooms, and RV parks/campgrounds, as well as other special living situations such as Airbnb units and spare bedrooms. The review of temporary housing resources presented above indicates that temporary housing resources in the Washington counties in the study area include approximately 2,100 housing units that are vacant and available for rent, with additional units classified for seasonal, recreational, or occasional use that may also be available (Table 16). Additional rental housing units are also available in Morrow and Umatilla counties in Oregon (Table 17).

Temporary housing is also available in the form of hotel and motel rooms. Available estimates indicate that there are about 6,800 hotel and motel rooms in the vicinity of the Facility. Assuming peak occupancy rates of 75 to 77 percent suggests that approximately 1,550 rooms are normally empty and available for rent during peak months.

This review indicates that existing temporary housing resources in the study area that are normally vacant and available for rent exceed estimated Facility construction-related demand. Viewed as a share of the supply of housing units available for rent (2,650 units) and the normally available supply of hotel and motel rooms (1,550 rooms), peak demand (53 workers) would be equivalent to about 1 percent of the normally available supply. Note that this likely overestimates the number of units that would be required (up to 53 during peak construction) because it assumes that the estimated demand would be single occupancy. In practice, workers are likely to share rental accommodations and also consider sharing hotel/motel rooms to reduce costs.

In addition, temporary accommodation in the study area includes 25 RV parks and campgrounds, with a combined total of more than 3,000 RV spaces (see the preceding section). There are also a number of homes for seasonal, recreational, or occasional use in the Facility vicinity and workers may seek alternative living situations including Airbnb units and spare bedrooms in homes that residents would be willing to rent to construction workers.

<sup>&</sup>lt;sup>6</sup> Data on RV parks and campsites were compiled from a number of online sources, including rvshare.com, goodsam.com, and campground.rvlife.com, as well as individual campground web sites.

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 discussed in the preceding section, the estimated normally available supply of temporary housing resources substantially exceeds estimated construction-related demand and meeting the construction workforce's housing needs is not expected to constrain the housing market for existing residents or lead to changes in housing values, rents, or new housing construction.

### 5.0 REFERENCES

- BLS (U.S. Bureau of Labor Statistics). 2023a. Labor Force Data by County, 2022 Annual Averages. Available online at: https://www.bls.gov/lau/tables.htm#aa
- BLS. 2023b. Occupational Employment and Wage Statistics. May 2022 Data. Available online at: https://www.bls.gov/oes/current/oes\_48300.htm
- ECONorthwest. 2023. Sunstone Solar Project Workforce and Housing Availability. Attachment U-1. Sunstone Solar Project Workforce and Housing Availability. Prepared for Tetra Tech, inc. June. Available online at: https://www.oregon.gov/energy/facilitiessafety/facilities/Facility%20Exhibits/ESP/2023-06-30-SSPASC-21-pASC-Exhibit-U-Public-Services.pdf
- Office of Management and Budget. 2020. Revised Delineations of Metropolitan Statistical Areas, Micropolitan Statistical Areas, and Combined Statistical Areas, and Guidance on Uses of the Delineations of These Areas. OMB Bulletin No. 20-01. March. Available online at: https://www.whitehouse.gov/wp-content/uploads/2020/03/Bulletin-20-01.pdf?
- Oregon Employment Department. 2023. Oregon All LAUS Measures. Available online at: https://www.qualityinfo.org
- PSU (Portland State University). 2014a. 2022 Annual Oregon Population Report Tables. Table 4.
   Populations for Oregon and Its Counties and Incorporated Cities and Towns: July 1, 2010 July 1, 2013 estimates; Census Counts 1990-2010. April. Available online at: https://www.pdx.edu/population-research/population-estimate-reports
- PSU. 2014b. Table 3. Components of Population Change for Oregon and its Counties: April 1, 2010 to July 1, 2013. Prepared by Population Research Center, PSU, April. Available online at: https://www.pdx.edu/population-research/population-estimate-reports
- PSU. 2021. Table 3. Components of Population Change for Oregon and its Counties: April 1, 2010 to July 1, 2020. Prepared by Population Research Center, PSU, April. Available online at: https://www.pdx.edu/population-research/population-estimate-reports
- PSU. 2023a. 2022 Annual Oregon Population Report Tables. Table 4. Populations for Oregon and Its Counties and Incorporated Cities and Towns: July 1, 2020 - July 1, 2022 estimates; Census

Counts 2000-2020. April 15. Available online at: https://www.pdx.edu/population-research/population-estimate-reports

- PSU. 2023b. Table 3. Components of Population Change for Oregon and its Counties: April 1, 2020 to July 1, 2022. Prepared by Population Research Center, PSU, April. Available online at: https://www.pdx.edu/population-research/population-estimate-reports
- PSU. 2023c. Population Forecasts. Available online at: https://www.pdx.edu/population-research/population-forecasts
- PSU. 2023d. Coordinated Population Forecasts 2023 through 2073. June 25. Available online at: https://www.pdx.edu/population-research/population-forecasts
- U.S. Bureau of Economic Analysis. 2022. CAEMP25N Total full-time and part-time employment by industry, 2021. November 16. Available online at: http://www.bea.gov.
- U.S. Census Bureau. 2013. DP04: Selected Housing. 2008-2012 American Community Survey 5-Year Estimates. Available online at: https://data.census.gov/cedsci/
- U.S. Census Bureau. 2022. HH-6. Average Population Per Household and Family: 1940 to Present. Current Population Survey. November. Available online at: https://www.census.gov/data/tables/time-series/demo/families/households.html
- U.S. Census Bureau. 2023a. QuickFacts. Available online at: https://www.census.gov/quickfacts/US
- U.S. Census Bureau. 2023b. B03002: Hispanic or Latino Origin by Race. 2017-2021 American Community Survey 5-Year Estimates. Available online at: https://data.census.gov/cedsci/
- U.S. Census Bureau. 2023c. B19301: Per Capita Income in The Past 12 Months (In 2021 Inflationadjusted Dollars). 2017-2021 American Community Survey 5-Year Estimates. Available online at: https://data.census.gov/cedsci/
- U.S. Census Bureau. 2023d. B19013: Median Household Income in the Past 12 Months (in 2021 Inflation-Adjusted Dollars). 2017-2021 American Community Survey 5-Year Estimates. Available online at: https://data.census.gov/cedsci/
- U.S. Census Bureau. 2023e. S1701: Poverty Status in the Past 12 Months. 2017-2021 American Community Survey 5-Year Estimates. Available online at: https://data.census.gov/cedsci/
- U.S. Census Bureau. 2023f. DP04: Selected Housing. 2017-2021 American Community Survey 5-Year Estimates. Available online at: https://data.census.gov/cedsci/
- U.S. Census Bureau. 2023g. B25004: Vacancy Status. Universe: Vacant Housing Units. 2017-2021 American Community Survey 5-Year Estimates. Available online at: https://data.census.gov/cedsci/
- VISIT Walla Walla. 2019. VISIT Walla Walla Tourism Data May 2019. Available online at: https://wallawalla.org/wp-content/uploads/2015/06/05-2019-TOURISM-DATA.pdf

- Washington Employment Security Department. 2023. Resident Civilian Labor Force And Employment In Washington State. Historical resident labor force and employment, not seasonally adjusted. August 16. Available online at: https://esd.wa.gov/labormarketinfo/labor-force
- Washington OFM (Office of Financial Management). 2022. Intercensal Estimates of April 1 Population and Housing, 2010-2020. Forecasting and Research Division. Version: 20220726. July 26. Available online at: https://ofm.wa.gov/washington-data-research/population-demographics
- Washington OFM. 2023a. April 1, 2023 Population of Cities, Towns and Counties Used for Allocation of Selected State Revenues. Forecasting and Research Division. April. Available online at: https://ofm.wa.gov/washington-data-research/population-demographics
- Washington OFM. 2023b. Population and Components of Change, 1960 to Present. Forecasting and Research Division. July 26. Available online at: https://ofm.wa.gov/washington-dataresearch/population-demographics