

### 3.11 SOCIAL AND ECONOMIC VALUES AND ENVIRONMENTAL JUSTICE

This section describes the existing social and economic conditions in the area that could be affected by the Project and estimates potential social and economic effects that could result from Project implementation. The Project Area was defined as Harney County for the analysis of social and economic values (some information about population is also presented at the Census Block Group and selected city levels). For the environmental justice analysis, the Project Area was primarily defined as Harney County. However, where data were available, analysis is also presented at the levels of smaller geographic units, such as Census Tracts, Census Block Groups, and selected cities. The Project site was defined as the physical footprint of the proposed Project.

The key social and economic resources addressed in this section include population, employment, income, tax revenues, property values, social values, and environmental justice. The existing social and economic conditions are discussed in the Affected Environment section followed by the Environmental Consequences detailing potential effects resulting from Project implementation.

#### 3.11.1 Methodology

This section provides an overview of the methodology used to estimate the economic and social effects of the Proposed Action. The social and economic values analysis presented in this section relies upon data published by a variety of local, state, and federal sources. Data was gathered for the Project Area as defined by Harney County and for comparison purposes, Oregon State and the United States, subject to availability. In addition, where available, data is also presented at the Census Block Group and Block levels and for the two larger cities of Burns and Hines. The Project site (including all alternative routes and the Echanis Wind Energy Project [Echanis Project]) was contained within Harney County.

The analysis incorporated comments from the public scoping process that was conducted from July to September 2009 and the DEIS comment period from July through September 2010. Comments from agency representatives, local organizations, and private citizens requested that the following social, economic, and environmental justice issues be addressed:

- Potential effects to all segments of the local economies, including impacts to private property values.
- One comment requested that the analysis avoid using IMPLAN (IMPact analysis for PLANning) and economic base models.
- Comparison of the cited benefits of the Project (e.g., job creation, revenue from energy generation, and climate benefits) to the cited costs (e.g., loss of other opportunities and values on public lands).
- Evaluation of potential effects to minority and low-income populations.
- Analysis of whether the amount of taxes generated by the Project would offset potential losses in revenue generated through tourism.
- Potential benefits to the local and regional economies in terms of job creation and tax revenue.
- Assessment of the potential benefits that could accrue if the proposed transmission line were sited on brownfields instead of on undeveloped lands and on private property instead of on federal lands.
- Potential effects to non-market values associated with undeveloped lands, including local quality of life and recreational and aesthetic opportunities.
- Exploration of other means of generating revenue for those ranchers offering portions of their property for Project development.

### 3.11.1.1 Social and Economic Methodology

Employment and labor income are common economic indicators used to measure the value of economic activity. Labor income is the sum of employee compensation (including all payroll costs and benefits) and proprietor income (profits). Employment is the average number of employees, whether full or part-time, of the businesses producing output. Income and employment represent the net economic benefits that accrue to a region as a result of increased economic activity.

This section analyzes the effects of the Project alternatives on county employment and labor income using an IMPLAN model. IMPLAN models include data about the linkages between different industries and facilitate the estimation of total economic effects. Total economic effects include direct effects attributed to the activity being analyzed, as well as the additional indirect and induced effects resulting from money circulating throughout the economy. Because the businesses within a local economy are linked together through the purchase and sales patterns of goods and services produced in the local area, an action which has a direct effect on one or more local industries is likely to have an indirect effect on many other businesses in the region. For example, an increase in construction would lead to increased spending in the adjacent area. Firms providing production inputs and support services to the construction industry would see a rise in their industry outputs as the demand for their products increased. These additional effects are known as the indirect economic effects. As household income is affected by the changes in regional economic activity, additional effects occur. The additional effects generated by changes in household spending are known as induced economic effects.

IMPLAN was used to estimate the total economic effects of the action alternatives based upon the direct expenditures during construction and operations for Project-related materials and labor. The estimate of these direct expenditures was based upon personal communication with the Applicant, as well as interviews with county businesses (Norling and Kane 2008). Certain assumptions were required regarding the pattern of expenditure, such as what sectors provided Project inputs and what proportion of materials were locally sourced. The data from the Applicant, as well as the assumptions, are documented in this section. To the extent that the actual Project-related expenditure pattern in the county varied from that used in the analysis, the results presented in this section could underestimate or overestimate the effects.

The effects of the action alternatives were estimated for the transmission line and the Echanis Project. Data about the Echanis Project was largely based upon previous research about the economic effects of the East Ridge and West Ridge Wind Projects on the county (ENTRIX, Inc. 2008). According to the Applicant, the economic effects of the Echanis Project should be very similar (Norling and Kane 2009).

Finally, no economic costs were estimated for the alternatives. The two primary sources of cost examined were changes in land use from grazing to energy production and transmission, and potential change in recreation visitation and expenditures. Because the Project footprints in the action alternatives would be relatively small and gross grazing revenue per acre would also be quite small (approximately \$15 per acre), no opportunity costs were estimated for county income or employment from reduced grazing opportunities. As discussed in Section 3.7 Recreation, there would likely be no effects to recreation-related visitation (and associated spending) to the Project Area, so no economic costs were anticipated for recreation.

Additional effects such as potential property value effects and fiscal effects were estimated using GIS technology, Excel®, and a benefit transfer of appropriate studies to the Project Area.

### 3.11.1.2 Environmental Justice Methodology

The social and economic information and other relevant data were used to address environmental justice in compliance with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, issued February 11, 1994. The environmental justice concerns

were addressed by first determining whether low-income and/or minority populations resided within the Project Area. Block-Group and Block Census data was supplemented with other more recent data from reliable sources, and GIS tools were used to identify and examine the distribution of minority and low-income populations in the vicinity of the proposed Project. Following this, any potential disproportionately high human health, environmental, and/or social and economic effects to these groups (relative to total population effects) as a consequence of the proposed Project and alternatives were identified and characterized. The findings reflect the results of discussions with local governments, state and county officials, relevant agencies, and other stakeholders, as well as from public input and review of relevant published documents and data.

### **3.11.2 Affected Environment**

The Affected Environment section identifies and quantifies, where appropriate, the current social, economic, and environmental justice conditions of the Project Area. The section includes examinations of trends, current conditions, and other factors of important social, economic, and environmental justice indicators to provide an accurate baseline assessment of the Project Area in relation to the state and nation.

#### **3.11.2.1 Social and Economic Values**

This section describes the existing characteristics and important trends for the population, economic base, taxes, and lifestyle and social values in the Project Area. State and national level data are provided for comparison. The economic base includes employment, unemployment, income and poverty, and housing issues. This information is presented for comparison purposes against the proposed Project's social and economic effects discussed later.

#### ***Population Characteristics and Projections***

The proposed Project would be located in Harney County, a sparsely populated rural county in southeast Oregon. There is an average of less than one person per square mile in the county, compared to an average of almost 40 people per square mile in Oregon and an average of 86 people per square mile nationwide. The population of Harney County grew by almost eight percent between 1990 and 2000, but this growth slowed down to a little over one percent between 2000 and 2008. (Portland State University 2009; U.S. Census Bureau 2009) In comparison, the population of Oregon increased by over 20 percent from 1990 to 2000, and another 11 percent from 2000 to 2008. Oregon outpaced the national population growth over both the 1990 to 2000 and 2000 to 2008 periods. As shown in Table 3.11-1, the 2008 population of Harney County was 7,705, accounting for only about 0.2 percent of the population of Oregon.

The U.S. Census Bureau has divided Harney County into two Census Tracts (CT), 9801 and 9802 (see Figure 3.11-1 for the locations of these CTs). CT9801 is comprised of six Census Block Groups (BGs), while CT9802 is divided into two BGs. The Project would be primarily located in CT9802, BG2, which is the largest BG in the county in terms of area. However, this analysis includes all eight BGs in the county because some of the effects, such as employment, could occur beyond the actual Project site. In addition, even though the two larger cities of Burns and Hines would be located outside of the Project site, data about these cities are presented where available because of the potential effects to them.

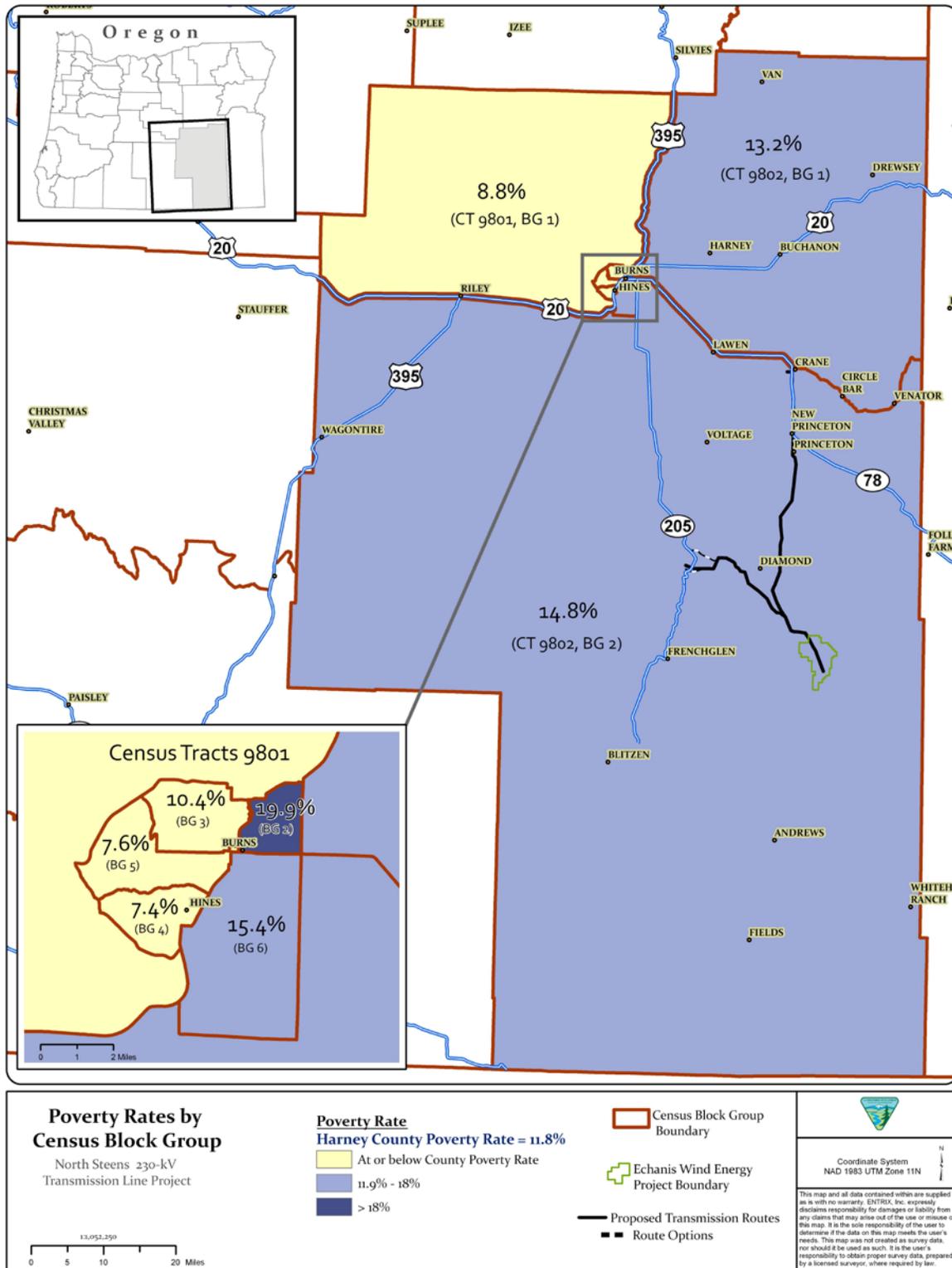


Figure 3.11-1 Poverty Rates by Census Block Group.

**Table 3.11-1 Population and Population Change, 1990-2008**

Area	Population			Population Change (%)			Population Density (People per Square Mile)
	1990	2000	2008	1990-2000	2000-2008	1990-2008	
City of Burns	2,913	3,064	3,025	5.2%	-1.3%	3.8%	n/a
City of Hines	1,452	1,623	1,870	11.8%	15.2%	28.8%	n/a
Harney County	7,060	7,609	7,705	7.8%	1.3%	9.1%	0.7
State of Oregon	2,842,321	3,421,399	3,791,075	20.4%	10.8%	33.4%	39.5
United States	248,709,873	281,421,906	304,059,724	13.2%	8.0%	22.3%	86.0

Note: Population density figures are based on the 2008 population estimates. n/a: Data not available

Sources:

Portland State University, Population Research Center, *Table 4. Population Estimates for Oregon and Its Counties and Incorporated Cities: April 1, 1990 - July 1, 2008*. Portland, Oregon, March 2009.

U.S. Census Bureau, Population Division, *Table 1. Annual Estimates for the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2008 (NST-EST2008-01)*, December 22, 2008. Website (<http://www.census.gov/popest/states/tables/NST-EST2008-01.xls>) accessed November 3, 2009.

U.S. Census Bureau, *DP-1. General Population and Housing Characteristics: 1990, 1990 Summary Tape File 1 (STF 1) - 100-Percent Data, United States, 1990*. Website (<http://factfinder.census.gov>) accessed November 3, 2009.

At the BG level, the most recent population information available is for 2000, which is presented in Table 3.11-2. The CT9801, BG4 has the greatest population in the county with 1,500 people in 2000. Based upon 2000 Census data, the five smallest BGs in the county in terms of area (i.e., BG2, BG3, BG4, BG5, and BG6 in CT9801) contained almost 69 percent of the county population. This was primarily due to the presence of the main population centers of Burns and Hines in these BGs. Between 1990 and 2000, the population of Burns grew by over five percent, but then experienced a reduction of more than one percent between 2000 and 2008 (see Table 3.11-1). Hines, on the other hand, experienced population increases of about 12 percent from 1990 to 2000 and by over 15 percent from 2000 to 2008. Based upon 2008 population estimates, roughly 64 percent of the county population resided within the incorporated cities of Burns and Hines.

**Table 3.11-2 Population by Census Block Group in Harney County, 2000**

Area	Population in 2000
Census Tract 9801, BG 1	390
Census Tract 9801, BG 2	827
Census Tract 9801, BG 3	1,022
Census Tract 9801, BG 4	1,500
Census Tract 9801, BG 5	1,129
Census Tract 9801, BG 6	753
Census Tract 9802, BG 1	1,021
Census Tract 9802, BG 2	967

Source: U.S. Census Bureau, Population Division. Website (<http://www.census.gov>) accessed November 3, 2009.

Population projections through 2030 for Harney County, Oregon, and the United States are shown in Table 3.11-3. (State of Oregon 2004; U.S. Census Bureau 2009) It was projected that the population of Harney County would decrease by two percent between 2000 and 2010. The population of the county was expected to experience a net gain of almost nine percent over the 10-year period between 2010 and 2020, and eight percent between 2020 and 2030. These figures represent a net 14.9 percent gain over the entire 30-year period (2000-2030) incorporating annual fluctuations (both positive and negative) in the population estimates. At the state level, greater growth rates are expected, increasing by 43 percent cumulatively from 2000 through 2030.

**Table 3.11-3 Population Projections, 2000 to 2030**

Area	Population				Population Change (%)		
	2000	2010	2020	2030	2000-2010	2010-2020	2020-2030
Harney County	7,609	7,454	8,098	8,745	-2.0%	8.6%	8.0%
State of Oregon	3,421,399	3,843,900	4,359,258	4,891,225	12.3%	13.4%	12.2%
United States	281,421,906	310,233,000	341,387,000	373,504,000	10.2%	10.0%	9.4%

Sources:

State of Oregon, Department of Administrative Services, Office of Economic Analysis, *Forecasts of Oregon's County Populations and Components of Change, 2000 - 2040*, Salem, Oregon, April 2004.

Harney County Planning Department, *Harney County Comprehensive Plan*, adopted November 2009.

U.S. Census Bureau, Population Division, *Table 1. Projections of the Population and Components of Change for the United States: 2010 to 2050 (NP2008-T1)*, August 14, 2008. Website (<http://www.census.gov/population/www/projections/files/nation/summary/np2008-t1.xls>) accessed November 3, 2009.

U.S. Census Bureau, Population Division, *Table 1. Annual Estimates for the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2008 (NST-EST2008-01)*, December 22, 2008. Website (<http://www.census.gov/popest/states/tables/NST-EST2008-01.xls>) accessed November 3, 2009.

Regions with protected natural landscapes can experience increased population growth, which leads to increased economic growth (Lewis and Plantinga 2000; Lorah 2000). Economic growth can be fueled by increased tourism, or by population growth from workers or retirees attracted by local amenities and the scenery. The magnitude of the effect of preserved natural areas to serve as an engine of economic growth depends largely upon the proximity to metropolitan areas and their associated services and transportation infrastructure. The largest urban area in the vicinity of the affected environment is Bend, and it has a population of less than 80,000 and is over 125 miles away from the Project Area. The lack of a proximate urban center could limit the potential for the undeveloped public lands to serve as an economic growth engine for the local community.

### Area Economy

The Harney County economy is based upon employment, the unemployment rate, industry employment, and income characteristics, as summarized below.

#### EMPLOYMENT

Industry specific employment information provides important insight into the makeup of a regional economy. Total nonfarm employment in Harney County was 2,220 jobs in November 2009. (Oregon Employment Department 2009) Nonfarm employment in the county was evenly divided between private employment (50 percent) and government employment (50 percent). Comparatively, private employment comprised 81 percent of Oregon’s nonfarm employment, with Government accounting for only 19 percent of Oregon’s nonfarm employment. The industrial category employing the most people in Harney County was local government with 32 percent of the workforce, compared with only 12 percent statewide. The trade, transportation, and utilities industry was the largest private employer in Harney County with 370 employees constituting 17 percent of the employment countywide. Similarly, the trade, transportation, and utilities industry accounted for 20 percent of employment statewide. Table 3.11-4 presents employment by industry in November 2009 for the county and state.

**Table 3.11-4 Nonfarm Employment by Industry, November 2009**

	Harney County		Oregon	
	Employees	% of Total	Employees	% of Total
<b>Total Nonfarm Employment</b>	2,220	100%	1,626,800	100%
<b>Total Private</b>	1,110	50%	1,321,500	81%
Mining, logging, and construction	90	4%	83,300	5%
Manufacturing	10	0%	162,800	10%
Trade, transportation, and utilities	370	17%	320,100	20%
Wholesale Trade	30	1%	75,300	5%
Retail trade	290	13%	190,900	12%
Transportation, warehousing, and utilities	50	2%	53,900	3%
Information	20	1%	34,700	2%
Financial activities	70	3%	93,200	6%
Professional and business services	90	4%	180,600	11%
Educational and health services	180	8%	229,200	14%
Leisure and hospitality	220	10%	160,300	10%
Other services	60	3%	57,300	4%
<b>Government</b>	1,110	50%	305,300	19%
Federal government	260	12%	29,000	2%
State government	140	6%	79,900	5%
Local government	710	32%	196,400	12%

Source: Oregon Employment Department, 'Current Employment Statistics,' accessed at <http://www.qualityinfo.org/olmisj/CES>.

Harney County nonfarm employment lost 360 employees between 2001 and November 2009, a decrease of 14 percent. The manufacturing industry was hit the hardest over this time period with a 96 percent decrease in industry employment or 230 employees. The decline of the manufacturing industry was fueled by the closure of the Louisiana-Pacific Corporation's lumber mill in Hines, which produced laminated veneer until its closure in late 2007. (Oregon Employment Department 2009) Additionally, Monaco Coach Corporation's Harney County plant furloughed many of its workers in 2008 (Oregon Employment Department 2009) before closing its doors in 2009 (Raff 2009). Countywide employment also decreased for local government (a 60-employee reduction) and the retail trade industry (a 50-employee reduction) since 2001, as indicated in Table 3.11-5. Industries increasing employment between 2001 and November 2009 included professional and business services and the educational and health services industry, each with an increase of 20 employees.

**Table 3.11-5 Changes in Industry Employment, 2001 and 2009**

	Harney County			Oregon		
	2001	Nov 2009	% Change	2001	Nov 2009	% Change
<b>Total Nonfarm Employment</b>	2,580	2,220	-14%	1,605,500	1,626,800	1%
<b>Total Private</b>	1,380	1,110	-20%	1,323,700	1,321,500	0%
Mining, logging, and construction	90	90	0%	89,800	83,300	-7%
Manufacturing	240	10	-96%	215,700	162,800	-25%
Trade, transportation, and utilities	430	370	-14%	320,800	320,100	0%
Wholesale Trade	30	30	0%	74,800	75,300	1%
Retail trade	340	290	-15%	189,200	190,900	1%
Transportation, warehousing, and utilities	50	50	0%	56,800	53,900	-5%
Information	40	20	-50%	39,900	34,700	-13%
Financial activities	70	70	0%	95,200	93,200	-2%
Professional and business services	70	90	29%	177,100	180,600	2%
Educational and health services	160	180	13%	178,800	229,200	28%
Leisure and hospitality	230	220	-4%	149,600	160,300	7%
Other services	50	60	20%	56,700	57,300	1%
<b>Government</b>	1,200	1,110	-8%	281,800	305,300	8%
Federal government	260	260	0%	30,000	29,000	-3%
State government	160	140	-13%	72,500	79,900	10%
Local government	770	710	-8%	179,400	196,400	9%

Source: Oregon Employment Department, 'Current Employment Statistics,' accessed at <http://www.qualityinfo.org/olmisj/CES>.

These trends were inconsistent with statewide industry employment between 2001 and November 2009. Statewide, a 25 percent decrease occurred in the manufacturing industry, though at a significantly lower rate (96 percent) than in Harney County. (Oregon Employment Department 2009) Additionally, the information industry decreased employment in the state by 13 percent over the same time period. Employment gains in Oregon helped to offset these losses, particularly in the education and health services industry with an increase in employment of 28 percent, 10 percent in state government, and nine percent in local government. Overall, statewide nonfarm employment increased by one percent or 21,300 employees between 2001 and November 2009 (see Table 3.11-5).

In addition to a changing industry profile, Harney County has faced a reduction in jobs. Between 2001 and November 2009, 360 jobs were lost in Harney County, a decrease of 14 percent. In comparison, the number of state jobs increased by 1 percent or 21,300 employees over the same time period. (Oregon Employment Department 2009)

Although not classified as a separate industry, there are numerous businesses in the retail and services sectors in Harney County that serve the tourism and recreation economy. In particular, the accommodation and food services, and the arts, entertainment, and recreation sectors are supported by the spending of recreation visitors. As indicated in Table 3.11-5, the Oregon Employment Department does not report the individual total employment in these industries, instead presenting the combined data for these two industries. In November 2009, an estimated 220 employees were employed in the Harney County leisure and hospitality

sectors. Employment in these sectors has remained fairly constant in the county, fluctuating between 220 to 260 employees since 2001.

Tourism is also important to the Harney County economy. Section 3.7 Recreation describes the various recreational activities in Harney County that attract non-local visitors and support retail and lodging establishments in Harney County.

**UNEMPLOYMENT**

The unemployment rate is a key economic indicator providing important insight into the economic health of a region. High unemployment is a sign of an unhealthy economy, which can lead to reduced spending, a decreased tax base, and more unemployment. In the current recession, Oregon, and particularly Harney County, faced rising and high unemployment. Oregon recorded the sixth highest unemployment rate nationwide in September 2009 (U.S. Bureau of Labor Statistics 2009), with an annual increase of 4.7 percent over September 2008, giving Oregon the fourth fastest growing unemployment rate nationwide. Although only one of four states to report an over-the-month decrease in the unemployment rate (0.5 percent decrease between August and September 2009), Oregon shed 10,300 jobs in September (seasonally adjusted). Thus, the slight decrease in the unemployment rate was due to a contraction in the labor force, which could be attributed to unemployed workers giving up the job search or going back to school and thus dropping out of the labor force.

As of November 2009, Oregon’s seasonally adjusted unemployment rate was 11.1 percent. This figure was 42 percent greater than the unemployment rate in November 2008 (see Table 3.11-6). The national unemployment rate grew faster than Oregon’s with a 49 percent increase in the unemployment rate from 2008 to 2009 (Oregon Employment Department 2009). The current unemployment rate in Oregon decreased from the historical high of 12.2 percent in May of 2009. (BLS 2009) With a 16.8 percent seasonally adjusted unemployment rate, Harney County was higher than the national average of 10 percent. Harney County currently has the second highest unemployment rate in Oregon, behind Crook County (17.4 percent). Harney County’s high unemployment rate qualifies the county as ‘economically distressed’ (over 8 percent) under Oregon law. (Business Oregon 2010) The designation places the county on the Business Oregon list, giving ‘economically distressed’ counties priority when funding technical assistance programs and projects. All Oregon counties, with the exception of Gilliam County,<sup>1</sup> are currently designated as economically distressed.

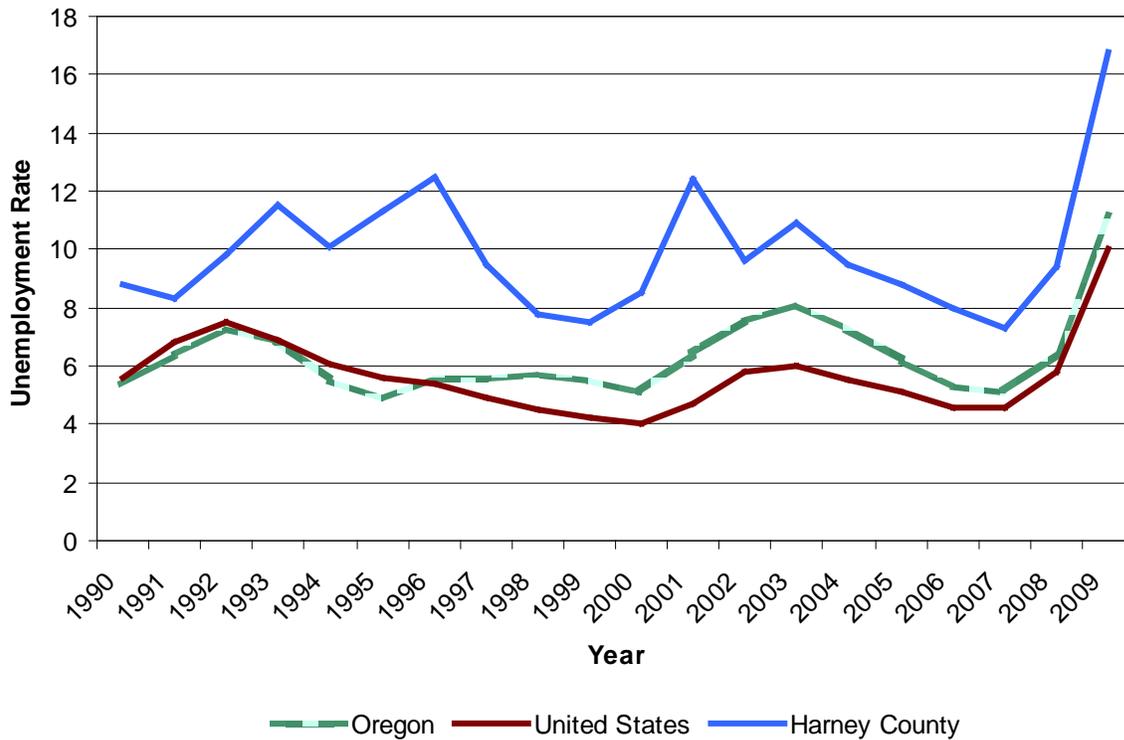
**Table 3.11-6 Recent Trends in Unemployment Rates in Harney County, Oregon, and the United States**

	November 2008	October 2009	November 2009	November 2008 to November 2009 Change (%)
Harney County	10.3%	18.9%	16.8%	63%
State of Oregon	7.8%	11.2%	11.1%	42%
United States	6.7%	10.2%	10.0%	49%

Sources: Oregon Employment Department, Employment Rates, Seasonally Adjusted. Website (<http://www.qualityinfo.org/olmisj/OlmisZine>) accessed November 3, 2009.

Historically, Harney County has had one of the highest unemployment rates in Oregon and has been consistently greater than the statewide average. Figure 3.11-2 presents the unemployment rate in Harney County, Oregon, and the United States.

<sup>1</sup> Benton County is currently designated as economically distressed with an unemployment rate of 7.5 percent being 2 months into the 6 month recovery period before a County is no longer designated as economically distressed.



**Figure 3.11-2 Historic Unemployment Rates in Harney County, Oregon, and the United States.**

Unemployment in Harney County, Oregon, and the nation over the last year is presented in Table 3.11-6. The unemployment rate for the county has increased by 63 percent over the last year, with a marked decrease in unemployment over the past month. This general trend was echoed by the state and nation. The unemployment situation in Harney County was articulated in an analysis by the Oregon Employment Department as follows (Yohannan2009):

Recent trends in Southeast Oregon have been very negative ... In Harney County, unemployment cracked 20 percent in February 2009 and climbed all the way up to 21.2 percent in March 2009, figures not seen since 1983. The county's monthly jobless rates have been among Oregon's highest throughout this year. Deep job losses in Harney County's manufacturing industry pushed year-to-date nonfarm employment 6 percent lower than last year's position, with March 2009's estimate of 2,170 being the lowest job count in about 14 years.

**INCOME**

Harney County had a relatively low per capita personal income of \$28,238 in 2007 (see Table 3.11-7), almost \$7,000 below that of Oregon (\$35,143) and more than \$10,000 below the national level (\$38,615). However, the annualized rate at which per capita income grew in the county between 2001 and 2007 (five percent) was greater than the state or national rates of 3.9 percent and 4.4 percent, respectfully (U.S. Bureau of Economic Analysis 2009). A low per capita income in a community indicates the presence of low paying employment opportunities.

**Table 3.11-7 Per Capita Personal Income, 2001 and 2007**

	Per Capita Personal Income		
	2001	2007	Annualized Rate of Change (%)
Harney County	21,706	28,238	5.0%
State of Oregon	28,530	35,143	3.9%
United States	30,582	38,615	4.4%

Source: U.S. Bureau of Economic Analysis, Regional Economic Accounts, accessed at [www.bea.gov/regional/](http://www.bea.gov/regional/) on June 4, 2009.

In fact, Federal non-military government employment accounted for the greatest per employee earnings of any industry in Harney County, with an average earning of \$85,141 per industry employee (note that this was not only direct wages/salaries; earnings includes wage and salary disbursements, supplements to wages and salaries, and proprietors' income) (U.S. Bureau of Economic Analysis 2009). This figure trailed the state and national per employee earnings for the industry by \$8,423 and \$13,703, respectively. State/local government was the industry with the second greatest earnings, with county residents earning an average of \$43,552 per employee. The earnings of county residents in the state and local government industries also trailed the state and national earnings. Detailed information about employee earnings by industry is presented in Table 3.11-8. Employees residing in Harney County earned less than similar employees in every industry elsewhere in the state or nation. The differences were substantial, ranging up to \$55,771 for finance workers. The state and local government industry was the greatest employer in the county and accounted for the greatest total employee earnings of any industrial category in the county. Due to undisclosed data at the county level, it was not possible to compare employee earnings by industry across the county, state, and national levels in all industries in 2007. At the state and national level, the greatest employee earnings were in the utilities industry with an average earning of \$141,268 per employee and \$157,166 per employee, respectively. Employment and earnings in the utilities industry was not disclosed at the county level (U.S. Bureau of Economic Analysis 2009).

As noted above for employment, tourist and other traveler spending also contributed to county income. Tourist and other traveler spending could be part of the accommodation and food services sector; and the arts, entertainment, and recreation sector.

### *Income and Property Tax Revenues*

The principle sources of tax revenue in Harney County are income taxes and property taxes. Oregon does not collect sales taxes. The total employment income for Harney County in 2006 was \$91,948,000, generating \$4,741,000 in state income taxes. Over \$90 billion in total income in Oregon in 2006 generated over \$5 billion in tax revenues for the state (State of Oregon 2009). Income and income tax statistics for Harney County and Oregon are presented in Table 3.11-9.

Measures 66 and 67 were passed in January 2010. Measure 66 increased personal tax rates and decreased the federal tax liability subtraction for individuals with a taxable income over \$125,000 and for joint filers with a taxable income over \$250,000. Additionally the measure exempted the first \$2,400 of unemployment compensation from taxes. Measure 67 increased the corporate minimum excise tax and marginal tax rates in Oregon. The new minimum tax ranges from \$150 for corporations with sales less than \$500,000 to \$100,000 for corporations earning over \$100 million in Oregon (Oregon Department of Revenue 2008).

**Table 3.11-8 Employee Earnings by Industry, 2007**

Industry	Harney County			Oregon			United States		
	Earnings (\$1,000s)	Employees	Per Employee Earnings	Earnings (\$1,000s)	Employees	Per Employee Earnings	Earnings (\$1,000s)	Employees	Per Employee Earnings
<b>Total</b>									
Farm earnings	\$9,738	877	\$11,104	\$1,192,358	67,660	\$17,623	\$54,734,000	2,841,000	\$19,266
All nonfarm earnings	\$113,161	3,574	\$31,662	\$97,541,631	2,252,383	\$43,306	\$8,793,506,000	178,102,800	\$49,373
<b>Private Employment</b>									
Forestry, fishing, related activities, and other	\$2,814	177	\$15,898	\$1,448,996	35,770	\$40,509	\$28,494,000	1,014,400	\$28,090
Mining		<10		\$226,283	3,681	\$61,473	\$120,486,000	984,900	\$122,333
Utilities	(D)	(D)		\$701,752	4,964	\$141,368	\$90,606,000	576,500	\$157,166
Construction	(D)	(D)		\$6,745,644	150,561	\$44,803	\$545,277,000	11,641,100	\$46,841
Manufacturing	(D)	(D)		\$14,437,333	217,114	\$66,497	\$1,066,119,000	14,512,000	\$73,465
Wholesale trade	\$1,343	54	\$24,870	\$6,378,920	89,537	\$71,243	\$470,450,000	6,657,800	\$70,661
Retail trade	\$9,050	493	\$18,357	\$6,885,871	255,349	\$26,967	\$549,242,000	19,282,000	\$28,485
Transportation and warehousing	(D)	(D)		\$3,392,809	68,813	\$49,305	\$291,957,000	5,887,700	\$49,588
Information	\$1,333	39	\$34,179	\$2,816,534	42,724	\$65,924	\$316,135,000	3,537,000	\$89,379
Finance and insurance	\$1,774	67	\$26,478	\$4,930,999	85,602	\$57,604	\$693,328,000	8,429,700	\$82,248
Real estate and rental and leasing	\$1,707	87	\$19,621	\$1,915,803	89,921	\$21,305	\$193,943,000	8,142,400	\$23,819
Professional, scientific, and technical services	\$2,571	103	\$24,961	\$6,942,550	128,427	\$54,058	\$873,240,000	11,866,300	\$73,590
Management of companies and enterprises	\$0	0		\$2,755,874	31,849	\$86,529	\$209,474,000	1,965,200	\$106,592
Administrative and waste services	\$873	98	\$8,908	\$3,388,650	125,923	\$26,910	\$334,385,000	11,180,300	\$29,908
Educational services	(D)	(D)		\$1,011,154	50,770	\$19,916	\$120,419,000	3,833,000	\$31,416
Health care and social assistance	(D)	(D)		\$10,645,180	242,233	\$43,946	\$839,910,000	18,204,900	\$46,136
Arts, entertainment, and recreation	(D)	(D)		\$773,380	51,204	\$15,104	\$92,215,000	3,736,900	\$24,677
Accommodation and food services	(D)	(D)		\$3,021,903	161,529	\$18,708	\$250,138,000	12,253,000	\$20,414

**Table 3.11-8 Employee Earnings by Industry, 2007**

Industry	Harney County			Oregon			United States		
	Earnings (\$1,000s)	Employees	Per Employee Earnings	Earnings (\$1,000s)	Employees	Per Employee Earnings	Earnings (\$1,000s)	Employees	Per Employee Earnings
Other services, excluding public administration	\$3,194	205	\$15,580	\$3,080,219	125,347	\$24,574	\$253,669,000	10,140,700	\$25,015
<b>Government Employment</b>									
Federal, non-military government	\$20,519	241	\$85,141	\$2,725,141	29,126	\$93,564	\$274,984,000	2,782,000	\$98,844
Military government	\$732	19	\$38,526	\$548,005	12,378	\$44,272	\$146,168,000	2,041,000	\$71,616
State and local government	\$34,537	793	\$43,552	\$12,768,631	249,561	\$51,164	\$1,032,867,000	19,434,000	\$53,147

Note: Due to rounding and missing data to avoid disclosure of confidential information, the private nonfarm employee earnings by industry type do not add up to the total nonfarm private earnings.

Note: Earnings include wage and salary disbursements, supplements to wages and salaries, and proprietors' income.

(D) Not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals.

Source: U.S. Bureau of Economic Analysis, Regional Economic Accounts, accessed at [www.bea.gov/regional/](http://www.bea.gov/regional/) on June 4, 2009.

**Table 3.11-9 Personal Income and Property Tax Revenues, 2006**

	Harney County	Oregon
Total Income	\$91,948,000	\$90,213,382,000
Total Income Taxes	\$4,741,000	\$5,150,942,000
Overall Income Tax Rate	5.2%	5.7%
Net Assessed Value of Properties	\$382,191,276	\$271,355,283,098
Total Property Taxes	\$5,547,000	\$4,279,042,000
Property Tax Rate	14.51%	15.77%

Source: Oregon Department of Revenue, 2006 Personal Income Tax Statistics, accessed at <http://www.oregon.gov/DOR/STATS/statistics.shtml> on 06/09/2009.

The Measures were expected to generate over \$700 million for state services, including public schools, budgeted for the 2010-2011 budget year (Cole 2010). The passing of the Measures will ease the budget shortfall, providing funding for public services in all areas of Oregon including Harney County. In Harney County, particular groups are expected to be directly affected by Measure 66 and Measure 67 (Oregon Education Association 2009). Funding provided for public services will benefit the 1,187 children in public schools, 846 people served by the Oregon Health Plan, and 56 people receiving long-term care in Harney County. The public will also benefit by the continued supervision of 96 criminal offenders in the County. The 471 residents initially filing for unemployment in 2009 will receive tax breaks while less than 20 residents will face increased taxes from the Measures.

Property assessed values and tax revenues also are presented in Table 3.11-9. The property tax rate in Harney County was over one percent lower than the Oregon average rate. Harney County generated over \$5.5 million in property tax revenue from a total assessed property value of \$382 million. The State of Oregon generated a total of over \$4 billion in property tax revenues from over \$271 trillion in assessed value (State of Oregon 2009).

Corporations doing business in Oregon pay a corporate excise tax. Thus, any changes in business taxes trickle down to the local area. The minimum corporate excise tax is \$10 for each affiliate in Oregon. In 2006, the utility industry in Oregon accounted for just 3.1 percent of statewide corporate taxes. (Oregon Department of Revenue 2008) In total, 86 utility tax returns were filed in 2006, 64 of which paid the minimum tax. This equates to 74.4 percent of utility companies paying the minimum tax, the highest of any industry. The average corporate taxes paid by Oregon utilities was just \$161,605. Business taxes are collected at the state level and contribute to the General Fund (Oregon Department of Revenue 2008), which is used to support a wide range of state services including schools and education, police, prisons, social services, and medical services for the needy (State of Oregon 2010). Part of those taxes are also redistributed to the local jurisdictions for their service needs.

***Lifestyle and Social Values***

Harney County was formed in 1889 and is very rural, having only about 7,600 people in its 10,180-square mile area in 2000, or about 0.75 people per square mile. The county was first explored by fur trappers and traders, but then was settled by cattle ranchers who were attracted to the area because of the abundance of bunchgrass for grazing and the availability of railroad access to Winnemucca, Nevada, located about 220 miles southeast of Burns (Harney County 2010). Today, many of the area ranches are still owned by members or descendants of the original homestead families and cattle ranching, raising sheep, and hay production remain important parts of the economy in the county (HCCC 2010).

Another important part of the rural lifestyle and community identity is derived from the undeveloped and open landscape of much of the county. The Bureau of Land Management (BLM) manages about 60 percent

of the lands within the county and the U.S. Fish and Wildlife Service (USFWS) manages an additional 20 percent, so that much of this land is likely to remain relatively undeveloped. Forests in the northern part of the county, Malheur National Wildlife Refuge (MNWR) in the middle of the county, Steens Mountain and the associated Steens Mountain Wilderness Area (SMWA) to the south, Diamond Craters Outstanding Natural Area, several wild and scenic river (WSR) segments (e.g., the Donner und Blitzen WSR), and several scenic byway tour routes provide a wide variety of recreational opportunities for the County's residents and visiting recreationists.

Finally, the diverse array of recreational opportunities represents another important part of county life. Recreational opportunities and activities include hunting, fishing, camping, picnicking, wildlife/landscape viewing, geological sightseeing, horseback riding, biking, cross country skiing, snowmobiling, high altitude running, historic buildings, and hot springs (also see Section 3.7 Recreation for additional information). Over 300 species of birds migrate through the county each spring and its importance is acknowledged with the annual John Scharff Migratory Bird Festival, held the first weekend in April. In addition, Harney County is known for having some of the lowest levels of ambient light in the nation, providing excellent star gazing opportunities (HCCC 2010).

The importance of preservation of the existing rural character and quality of life within the county is evidenced by some of the comments received during the scoping period for the EIS:

- seven comments were concerned about the effects any light emitted from the turbines could have on the nighttime sky, including potential effects to tourism;
- 31 comments discussed the general effects of the Project on the area viewshed, including on Steens Mountain, within the CMPA, Kiger Wild Horse viewing area, Diamond Loop Back Country Byway, Kiger Gorge, and recreational areas;
- 17 comments were concerned with the appropriateness of BLM granting a right-of-way (ROW) for the transmission line through the CMPA. The majority of these comments argued that the Project would violate the Steens Mountain CMPA's direction "to conserve, protect, and manage the long-term ecological integrity of Steens Mountain for future and present generations";
- six comments stated that if the Project crossed the MNWR, it would be incompatible with the purposes of the NWRSA;
- six comments expressed concern that the Project would affect the ecological integrity of Steens Mountain, that turbines would encroach into natural areas, that the loss of pristine natural areas would damage the human psyche, and that there would be significant long-term effects to the environment from the Project; and
- nine comments were made regarding noise effects from turbines and transmission lines on human health, recreational enjoyment, and wildlife, especially sensitive species and especially at night. Adequacy of setbacks from roads, private property, Loop Road, and Mann Lake were of particular concern.

### 3.11.2.2 Environmental Justice

The evaluation of environmental justice issues is mandated and regulated at the federal level, and compliance with NEPA requires analysis of environmental justice effects. As such, environmental justice is considered part of the NEPA process. The U.S. Environmental Protection Agency's (EPA) Office of Environmental Justice offers the following definition of environmental justice:

The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group should bear a disproportionate share

of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of Federal, state, local, and tribal programs and policies.

The concept of environmental justice is rooted in the Civil Rights Act of 1964, which prohibited discrimination in Federally-assisted programs, and in Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, issued February 11, 1994. Executive Order 12898 was intended to ensure that federal actions and policies did not result in disproportionately high and adverse effects upon minority or low-income populations. It requires each federal agency to incorporate environmental justice into its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects, including social or economic effects, of its programs, policies, and activities implemented both directly and indirectly (for which it provides permitting or funding), on minority populations and low-income populations of the United States (Federal Register 1994). Additional guidance from the President's Council on Environmental Quality (CEQ) clarified that environmental justice concerns could arise from effects on the natural and physical environment that produce human health or ecological outcomes, or from adverse social or economic changes.

This subsection first provides the background data for the analysis of environmental justice. The key social and economic parameters addressed here are race/ethnicity and measures of social and economic well-being, including per capita income, poverty rates, and unemployment rates. The geographic scope of the information presented primarily includes Harney County, with data about the State of Oregon and the United States provided for comparative purposes. Where available, data are presented at the level of the eight Census Block Groups (within two Census Tracts) in the county and also for the two larger cities of Burns and Hines. A BG is the smallest geographic unit for which poverty rate data are available. These data were used to identify geographic concentrations of minority and low-income populations that could suffer disproportionately high and adverse human health or environmental effects from the Project.

### *Low-Income Populations*

According to the CEQ Guidance, (CEQ 2009) communities should be identified as "low-income" based upon the "annual statistical poverty thresholds from the Bureau of the Census' *Current Population Reports, Series P-60 on Income and Poverty*. In other words, a community can be considered low-income if the median household income for a census tract is below the poverty level or if other indications are present that indicate a low-income community is present within the census tract. For the purpose of this analysis, the per capita income, median household income, poverty rates, and child poverty rates in the BGs in the Project Area are compared to those in Harney County to identify low-income communities that could suffer disproportionately high and adverse effects from the Project.

As derivatives of total personal income, per capita and median household income and poverty rates represent widely used economic indicators of social well-being. Table 3.11-10 presents these social and economic data for the BGs and major cities in the Project Area, Harney County, and Oregon. In 2007, per capita personal income in Harney County was \$28,238, which was approximately 80 percent of the statewide level of \$35,143. This low per capita income indicates that there were low paying employment opportunities in the county. As stated earlier and presented in Table 3.11-6, per capita income in Harney County was about \$7,000 less than in Oregon and \$10,000 less than the United States, though the growth rate of this income since 2001 is greater in the county (30 percent) than that of either the state (23 percent) or the nation (26 percent).

There is some disparity between local, county, and statewide per capita and median household income levels. Based upon 2000 Census data (but converted to 2009 dollars), median household incomes in Harney County and Oregon were \$39,605 and \$52,346, respectively. Median household income levels were even lower than the county in the two BGs in CT 9802 where the Project would be located, BG1 was \$38,951 and BG2 was

\$39,080. Overall, all but two of the eight BGs in the county had median household incomes greater than the county, BG1 and BG2 in CT9801.

Finally, poverty rates represent the percentage of an area's total population living at or below the poverty threshold established by the U.S. Census Bureau. Based upon 2000 Census data, the poverty rate was 11.8 percent in Harney County and 11.6 percent in the State of Oregon (13.4 percent based upon 2008 estimates). However, both of the BGs in CT9802 had higher poverty rates than the county and state, with BG1 and BG2 having poverty rates of 13.2 percent (11.8 percent greater than the county) and 14.8 percent (25.8 percent greater than the county), respectively (see Figure 3.11-1). The highest poverty rate occurred in CT9801, with 19.9 percent in BG2 (69.1 percent greater than the county). The entire Project would be located in BG2 within CT9802, which is the largest BG in the county in terms of area. Although not enough information is available at the block group level to identify whether low-income populations are located directly adjacent to the Project, the poverty rate for CT9802, BG2 was within three percentage points of the same measures for Harney County and was less than 50 percent. Therefore, an environmental justice population was not identified close to the Project, based upon poverty rates.

According to the 2000 Census, the poverty rate for children aged 17 years or less in Harney County was 12.9 percent (see Table 3.11-10). As presented in Figure 3.11-3, with 17.2 percent and 22.7 percent, respectively, both BG1 and BG2 in CT9802 had poverty rates for children exceeding that for the county by 33.2 percent and 76.4 percent. Child poverty was especially high in CT9801, BG2, where it was 25.6 percent, 98.2 percent greater than the county. Similar to poverty rate data, the smallest geographic unit for which child poverty data was available was at the BG level. Therefore, not enough information was available to identify whether low-income populations of children were located directly adjacent to the Project.

As shown in Table 3.11-8 and discussed in more detail in earlier sections, the unemployment rate in Harney County (16.8 percent in November 2009) was greater than that for Oregon (11.1 percent) and the United States (10.0 percent). This rate increased approximately 63 percent since November 2008 (10.3 percent), as presented in Figure 3.11-1. However, the unemployment rates in the county, state, and nation then decreased through December 2009.

### ***Minority Populations***

In accordance with CEQ Guidance (CEQ 2009), minority populations should be identified if the minority population within the Project Area "exceeds 50 percent" or if the percentage of minority population in the Project Area is meaningfully greater than the "minority population percentage in the general population or other appropriate unit of geographic analysis." For this analysis, the minority population percentage of the BG in which the Project would be located was compared to Harney County levels to determine whether an environmental justice population was present.

Table 3.11-11 presents the minority composition of the BGs in Harney County, the cities of Burns and Hines, Harney County, Oregon, and the United States, based upon 2000 Census data. Table 3.11-12 presents that information for the county, state, and nation based upon 2008 population estimates prepared by the U.S. Census Bureau. The entire Project would be located in CT9802, BG 2. In 2000, minority populations living in individual BGs within Harney County ranged from 6 to 22 percent. The Harney County population as a whole was 10 percent minority. In comparison, minority percentages for Oregon and the United States were 16 percent and 31 percent, respectively. Nine percent of the residents living within CT9802, BG2 (where the Project would be located) were minorities, which was less than the percentage of minorities in Harney County (10 percent) (Table 3.11-11; U.S. Census 2010a).

**Table 3.11-10 Income and Poverty Rates based upon 2000 Census Data (Incomes in 2009 dollars)**

Area	Per Capita Income	Median Household Income	Poverty Rate	Child Poverty Rate	% Difference in Poverty Rate Compared to Harney County	% Difference in Child Poverty Rate Compared to Harney County
Census Tract 9801, BG 1	\$24,528	\$61,480	8.8%	20.3%	-24.9%	57.2%
Census Tract 9801, BG 2	\$21,996	\$30,704	19.9%	25.6%	69.1%	98.2%
Census Tract 9801, BG 3	\$22,130	\$33,890	10.4%	11.1%	-11.6%	-14.2%
Census Tract 9801, BG 4	\$20,615	\$52,240	7.4%	8.0%	-37.1%	-38.0%
Census Tract 9801, BG 5	\$19,071	\$37,769	7.6%	2.6%	-35.3%	-79.7%
Census Tract 9801, BG 6	\$14,274	\$33,866	15.4%	12.3%	31.0%	-4.4%
Census Tract 9802, BG 1	\$24,343	\$38,951	13.2%	17.2%	11.8%	33.2%
<b>Census Tract 9802, BG 2</b>	<b>\$19,866</b>	<b>\$39,080</b>	<b>14.8%</b>	<b>22.7%</b>	<b>25.8%</b>	<b>76.4%</b>
City of Burns	\$20,756	\$34,105	12.3%	8.7%	4.2%	-32.5%
City of Hines	\$20,192	\$52,347	9.9%	10.7%	-16.0%	-16.9%
Harney County	\$20,673 (\$21,706 in 2001) (\$28,238 in 2007)	\$39,605	11.8%	12.9%	0.0%	0.0%
State of Oregon	\$26,789 (\$28,530 in 2001) (\$35,143 in 2007)	\$52,346 (\$49,863 in 2008)	11.6% (13.4% in 2008)	14.7%	-1.4%	14.0%
United States	\$27,617 (\$30,582 in 2001) (\$38,615 in 2007)	\$53,725 (\$52,175 in 2008)	12.4% (13.2% in 2008)	16.6%	5.1%	28.4%

## Sources:

Unless otherwise stated, the source of data presented in this table is the 2000 Population and Housing Census. For the sake of consistency, all dollar values in this table are converted to 2009 dollars, such as the values for Per Capita Income and Median Household Income.

U.S. Census Bureau, Table P53. Median Household Income in 1999 (Dollars) [1], Census 2000 Summary File 3 (SF 3) Sample Data, 2000. Website (<http://factfinder.census.gov/>) accessed November 3, 2009.

U.S. Census Bureau, Table P82. Per Capita Income in 1999 (Dollars) [1], Census 2000 Summary File 3 (SF 3) Sample Data, 2000. Website (<http://factfinder.census.gov/>) accessed November 3, 2009.

U.S. Census Bureau, Table P87. Poverty Status in 1999 by Age [17], Census 2000 Summary File 3 (SF 3) - Sample Data, 2000. Website (<http://factfinder.census.gov/>) accessed November 3, 2009.

U.S. Census Bureau, Selected Economic Characteristics: 2006-2008, 2006-2008 American Community Survey 3-Year Estimates. Website (<http://factfinder.census.gov/>) accessed November 4, 2009.

U.S. Bureau of Economic Analysis, Regional Economic Accounts. Website ([www.bea.gov/regional/](http://www.bea.gov/regional/)) accessed June 4, 2009.

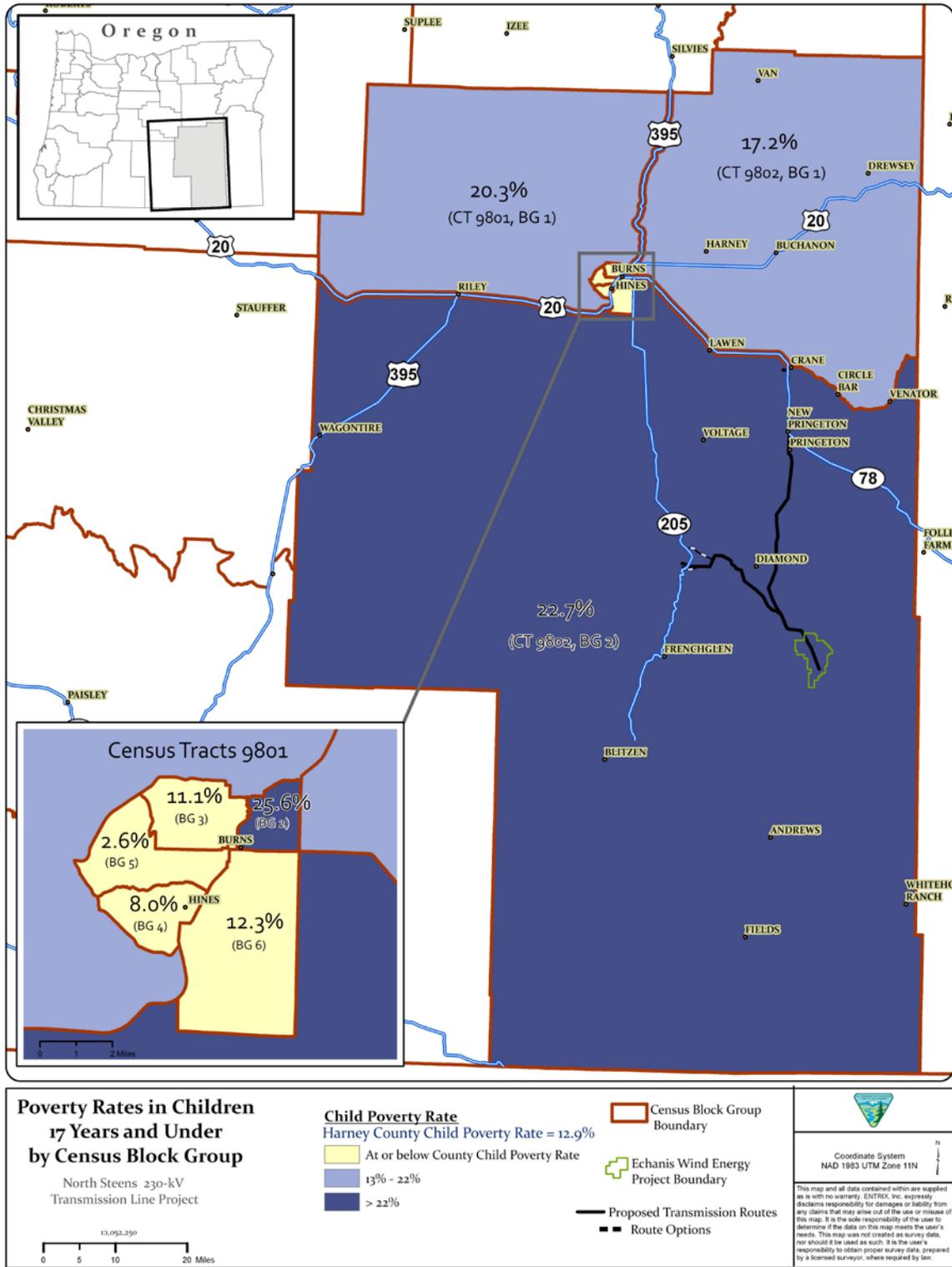


Figure 3.11-3 Poverty Rates for Children 17 Years and Under by Census Block Group.

By 2008, Harney County’s minority population was 842 residents and represented 12 percent of the total population. The Harney County minority population grew in relation to its total population and continued to reflect relatively fewer minority residents compared to Oregon, which was 20 percent minority in 2008, and the United States, which was 34 percent minority in 2008 (Table 3.11-12). Updated BG data was not available since 2000.

**Table 3.11-11 Minority Population (Based upon 2000 Census Population)**

Geographic Area	Total Population	Minority <sup>a</sup> Population	Minority <sup>a</sup> Percentage
CT 9801, BG 1	390	72	18%
CT 9801, BG 2	827	71	9%
CT 9801, BG 3	1,022	226	22%
CT 9801, BG 4	1,500	92	6%
CT 9801, BG 5	1,129	100	9%
CT 9801, BG 6	753	81	11%
CT 9802, BG 1	1,021	59	6%
CT 9802, BG 2	967	85	9%
City of Burns	3,064	307	10%
City of Hines	1,623	110	7%
Harney County	7,609	786	10%
Oregon State	3,421,399	563,783	16%
United States	281,421,906	86,869,132	31%

<sup>a</sup> Minority is defined as Black and African American, American Indian and Alaskan Native, Asian, Native Hawaiian and Other Pacific Islander, Hispanic/Latino, or any person of two or more races.

Source:

U.S. Census Bureau, Table P8. Hispanic or Latino by Race (Total population), Census 2000 Summary File 1 (SF 1) 100-Percent Data, 2000. Website (<http://factfinder.census.gov/>) accessed May 17, 2010.

**Table 3.11-12 Minority Population (Based upon 2008 Population Estimates)**

Area	2008 Population	Minority <sup>a</sup> Population	Minority <sup>a</sup> Percentage
Harney County	6,747	842	12%
State of Oregon	3,790,060	757,022	20%
United States	304,059,724	104,568,266	34%

<sup>a</sup> Minority is defined as Black and African American, American Indian and Alaskan Native, Asian, Native Hawaiian and Other Pacific Islander, Hispanic/Latino, or any person of two or more races.

Source:

U.S. Census Bureau, Population Estimates Program, 2008 Population Estimates. Table T4-2008. Hispanic or Latino By Race [15]. Website (<http://factfinder.census.gov/>) accessed May 18, 2010.

Assuming that demographics in CT9802, BG2 have not changed substantially since 2000, an environmental justice population does not exist near the Project, based upon the minority and poverty rates for the general population. The Project would be located within CT9802, BG2, which had approximately 9 percent minorities in 2000, reflecting relatively fewer minority residents when compared to Harney County. The percentage of residents living below the poverty level in 1999 in CT9802, BG2 was within three percentage points of the Harney County level. Neither the minority or the poverty percentage was greater than 50 percent. Therefore, more localized effects from the Project, such as temporary construction effects and other location-dependent potential effects, would not be disproportionately experienced by a minority or low-

income population compared to non-minority and non-low-income populations. Environmental justice is, therefore, not further analyzed in this EIS.

The Project would result in beneficial impacts to all Harney County residents, including those living near the proposed turbines and transmission line alternatives. These benefits would include jobs and spending resulting from Project construction and operation, as discussed in Section 3.11.3.

### **3.11.3 Environmental Consequences and Mitigation**

The Project is expected to affect social and economic conditions in Harney County, which is the study area selected for the social and economic analyses. Specifically, the Project would likely affect county employment, income, property values, and property taxes. This section describes the impact analysis methodology, data sources, and the estimated effects. Effects are discussed for each alternative, in four subsections organized by the following topic areas: employment and labor income, property values, property taxes, and social values.

#### **3.11.3.1 Alternative A – No Action**

##### ***Social and Economic Effects***

There are no anticipated effects to employment, output, and labor income from Alternative A. The No Action Alternative would result in Harney County not receiving the potential employment, income, and output benefits created by the Project. Additionally, the tax benefits of the Project would not be collected by the county under the No Action Alternative. The existing social and economic conditions would likely continue along current trend lines, and the local relatively undeveloped rural lifestyle would remain unchanged.

#### **3.11.3.2 Echanis Project Effects Common to All Action Alternatives**

##### ***Social and Economic Effects***

The potential effects of the Echanis Project upon the social and economic condition in the Project Area would include changes in employment, income, revenue and fiscal health, and property values. These factors were each examined and anticipated changes from construction of the Echanis Project were estimated where appropriate.

##### **EMPLOYMENT**

The estimates of employment effects represent the total number of jobs, including full and part-time, expected to be created as a result of the Echanis Project. Total employment was estimated first for the construction phase and then for the operations phase of the Echanis Project.

##### **SHORT-TERM (CONSTRUCTION PHASE) EMPLOYMENT EFFECTS**

The construction phase employment effects upon the county would be primarily from labor hired to construct the Echanis Project. The Applicant plans to hire approximately 100 employees for nine months to construct the Echanis Project (see Table 3.11-13; Norling 2008). The Applicant estimates that approximately 30 wind project construction workers would be local residents (Norling and Kane 2009), as indicated by the Echanis Project permit condition No. 53:

sectors. Employment in these sectors has remained fairly constant in the county, fluctuating between 220 to 260 employees since 2001.

Tourism is also important to the Harney County economy. Section 3.7 Recreation describes the various recreational activities in Harney County that attract non-local visitors and support retail and lodging establishments in Harney County.

**UNEMPLOYMENT**

The unemployment rate is a key economic indicator providing important insight into the economic health of a region. High unemployment is a sign of an unhealthy economy, which can lead to reduced spending, a decreased tax base, and more unemployment. In the current recession, Oregon, and particularly Harney County, faced rising and high unemployment. Oregon recorded the sixth highest unemployment rate nationwide in September 2009 (U.S. Bureau of Labor Statistics 2009), with an annual increase of 4.7 percent over September 2008, giving Oregon the fourth fastest growing unemployment rate nationwide. Although only one of four states to report an over-the-month decrease in the unemployment rate (0.5 percent decrease between August and September 2009), Oregon shed 10,300 jobs in September (seasonally adjusted). Thus, the slight decrease in the unemployment rate was due to a contraction in the labor force, which could be attributed to unemployed workers giving up the job search or going back to school and thus dropping out of the labor force.

As of November 2009, Oregon’s seasonally adjusted unemployment rate was 11.1 percent. This figure was 42 percent greater than the unemployment rate in November 2008 (see Table 3.11-6). The national unemployment rate grew faster than Oregon’s with a 49 percent increase in the unemployment rate from 2008 to 2009 (Oregon Employment Department 2009). The current unemployment rate in Oregon decreased from the historical high of 12.2 percent in May of 2009. (BLS 2009) With a 16.8 percent seasonally adjusted unemployment rate, Harney County was higher than the national average of 10 percent. Harney County currently has the second highest unemployment rate in Oregon, behind Crook County (17.4 percent). Harney County’s high unemployment rate qualifies the county as ‘economically distressed’ (over 8 percent) under Oregon law. (Business Oregon 2010) The designation places the county on the Business Oregon list, giving ‘economically distressed’ counties priority when funding technical assistance programs and projects. All Oregon counties, with the exception of Gilliam County,<sup>1</sup> are currently designated as economically distressed.

**Table 3.11-6 Recent Trends in Unemployment Rates in Harney County, Oregon, and the United States**

	November 2008	October 2009	November 2009	November 2008 to November 2009 Change (%)
Harney County	10.3%	18.9%	16.8%	63%
State of Oregon	7.8%	11.2%	11.1%	42%
United States	6.7%	10.2%	10.0%	49%

Sources: Oregon Employment Department, Employment Rates, Seasonally Adjusted. Website (<http://www.qualityinfo.org/olmisj/OlmisZine>) accessed November 3, 2009.

Historically, Harney County has had one of the highest unemployment rates in Oregon and has been consistently greater than the statewide average. Figure 3.11-2 presents the unemployment rate in Harney County, Oregon, and the United States.

<sup>1</sup> Benton County is currently designated as economically distressed with an unemployment rate of 7.5 percent being 2 months into the 6 month recovery period before a County is no longer designated as economically distressed.

LOCAL HIRING – The applicant shall use best efforts to hire qualified Harney County residents during project construction. During the operation phase, the applicant or its operator shall use best efforts to hire Harney County residents who meet minimum requirements established by the applicant or operator, and said operator shall provide training as appropriate. In the event that after the best efforts suitable resident employees cannot be found, employees other than Harney County residents may be utilized.

**Table 3.11-13 Employment Effects for the Echanis Project**

	Construction Phase (Up to 1 Year)	Operations Phase (Annually for 40 Years)
Direct	100	10
Indirect	30	0
Induced	15	5
<b>Total</b>	<b>145</b>	<b>15</b>

The remaining construction workers would likely be temporary residents that would relocate for the construction phase of the Project.

In addition to the jobs directly generated by the Project, employment would be generated or supported in other sectors as construction employees spend their wages at businesses in the county (i.e., induced effects). The induced effect would likely be greater for construction workers who were county residents than for workers who temporarily relocated to the county. Non-resident construction workers were estimated to limit their spending in the county to approximately \$1,400 per month for lodging, food, and gas.<sup>2</sup> Spending by resident workers was estimated using the average household consumption patterns.<sup>3</sup> Additionally, local employment would increase as a result of increased household income and associated spending from one-time transmission line ROW payments paid to local landowners whose property would be crossed. The total increase in income associated with the increase in household spending/income would total approximately \$1.0 million.<sup>4</sup> Increased household spending would likely generate approximately 30 jobs (15 jobs related to spending from the Echanis Project and 15 from Alternative B transmission line-related spending).

Local jobs would also be supported by expenditures for goods and materials used as inputs for the Echanis Project (i.e., indirect effect). The Applicant estimated that construction of the Echanis Project would require \$3.5 million of local goods and services, including truck transport, road construction, fuel, transmission line work, and general maintenance and construction. This increased demand for local goods and services were estimated to generate approximately 30 jobs (from Echanis-related spending).

**LONG-TERM (OPERATIONS PHASE) EMPLOYMENT EFFECTS**

During the operations phase of the Echanis Project, maintenance and operations jobs would be generated. The Applicant estimated that the Echanis Project would directly employ approximately 10 workers (Norling and Kane 2009). Employment opportunities resulting from the purchase of materials for the Echanis Project, such as the total spending for local goods and services, would be fairly low (\$20,000 for the Echanis Project).

<sup>2</sup> It was assumed that over the construction period half of the non-local employees would reside at hotels in Burns and the other half would stay at RV parks in The Narrows. Expenditures on gasoline were estimated assuming that construction employees would travel round trip, three to a car from Burns as well as from The Narrows to the wind farm project site. Gasoline expenditure estimates also accounted for weekend travel from The Narrows to Burns for entertainment purposes over the course of the projects construction.

<sup>3</sup> Local payroll is analyzed in IMPLAN sector 5001, employee compensation.

<sup>4</sup> Note that employment effects of this increased income will likely be spread out over several years, rather than being experienced solely during the construction period.

LOCAL HIRING – The applicant shall use best efforts to hire qualified Harney County residents during project construction. During the operation phase, the applicant or its operator shall use best efforts to hire Harney County residents who meet minimum requirements established by the applicant or operator, and said operator shall provide training as appropriate. In the event that after the best efforts suitable resident employees cannot be found, employees other than Harney County residents may be utilized.

**Table 3.11-13 Employment Effects for the Echanis Project**

	Construction Phase (Up to 1 Year)	Operations Phase (Annually for 40 Years)
Direct	100	10
Indirect	30	0
Induced	15	5
<b>Total</b>	<b>145</b>	<b>15</b>

The remaining construction workers would likely be temporary residents that would relocate for the construction phase of the Project.

In addition to the jobs directly generated by the Project, employment would be generated or supported in other sectors as construction employees spend their wages at businesses in the county (i.e., induced effects). The induced effect would likely be greater for construction workers who were county residents than for workers who temporarily relocated to the county. Non-resident construction workers were estimated to limit their spending in the county to approximately \$1,400 per month for lodging, food, and gas.<sup>2</sup> Spending by resident workers was estimated using the average household consumption patterns.<sup>3</sup> Additionally, local employment would increase as a result of increased household income and associated spending from one-time transmission line ROW payments paid to local landowners whose property would be crossed. The total increase in income associated with the increase in household spending/income would total approximately \$1.0 million.<sup>4</sup> Increased household spending would likely generate approximately 30 jobs (15 jobs related to spending from the Echanis Project and 15 from Alternative B transmission line-related spending).

Local jobs would also be supported by expenditures for goods and materials used as inputs for the Echanis Project (i.e., indirect effect). The Applicant estimated that construction of the Echanis Project would require \$3.5 million of local goods and services, including truck transport, road construction, fuel, transmission line work, and general maintenance and construction. This increased demand for local goods and services were estimated to generate approximately 30 jobs (from Echanis-related spending).

**LONG-TERM (OPERATIONS PHASE) EMPLOYMENT EFFECTS**

During the operations phase of the Echanis Project, maintenance and operations jobs would be generated. The Applicant estimated that the Echanis Project would directly employ approximately 10 workers (Norling and Kane 2009). Employment opportunities resulting from the purchase of materials for the Echanis Project, such as the total spending for local goods and services, would be fairly low (\$20,000 for the Echanis Project).

<sup>2</sup> It was assumed that over the construction period half of the non-local employees would reside at hotels in Burns and the other half would stay at RV parks in The Narrows. Expenditures on gasoline were estimated assuming that construction employees would travel round trip, three to a car from Burns as well as from The Narrows to the wind farm project site. Gasoline expenditure estimates also accounted for weekend travel from The Narrows to Burns for entertainment purposes over the course of the projects construction.

<sup>3</sup> Local payroll is analyzed in IMPLAN sector 5001, employee compensation.

<sup>4</sup> Note that employment effects of this increased income will likely be spread out over several years, rather than being experienced solely during the construction period.

Some employment, however, would likely result from increased household spending as a result of Project-related income. In particular, household spending of income from the Echanis Project site lease payment during the operations phase would generate an estimated five jobs in the county.

**SUMMARY OF EMPLOYMENT EFFECTS**

Table 3.11-13 summarizes the total employment effects for the Echanis Project. The total employment effect during the nine months of construction of the Echanis Project was estimated to be 145 jobs. Long-term operation of the Echanis Project was estimated to generate 15 jobs (10 direct jobs and 5 induced jobs) over the next 40 years.

**INCOME**

Potential income effects can be represented by total labor income. Total labor income would include the wages that would be earned by employees filling the additional jobs generated by the Project, as well as the additional profits accruing to business owners from Project-related expenditures.

**SHORT-TERM (CONSTRUCTION PHASE) INCOME EFFECTS**

Similar to employment, labor income generated during construction would result in a temporary benefit for the local economy. Project payroll for the nine-month Echanis Project construction was estimated to be \$3.5 million (see Table 3.11-14; Norling and Kane 2009). Income would increase during the construction phase, not only from direct spending by the Applicant for wages and the site lease and transmission line ROW payments, but also from increased income for the local owners and workers employed at businesses supplying the Project with goods and services. This indirect income effect, estimated to be \$1.0 million for construction of the Echanis Project, would be realized by businesses that supplied goods and services to the Project, notably businesses that provided maintenance and transportation-related services or goods.

**Table 3.11-14 Income Effects for the Echanis Project**

	One-Time Construction	Annual Operations	Present Value Over 40 Years
Direct	\$3,500,000	\$1,200,000	<u>\$30,330,000</u>
Indirect	\$1,030,000	\$0	<u>\$1,050,000</u>
Induced	\$470,000	\$100,000	<u>\$2,660,000</u>
<b>Total</b>	<b>\$4,990,000</b>	<b>\$1,300,000</b>	<b><u>\$34,040,000</u></b>

Note: Figures may not sum to total due to rounding

Income would also be generated for businesses that supplied goods and services to the workers employed by the Applicant, including grocery stores, restaurants, hotels, and gas stations. It was estimated that spending by Echanis Project construction workers would increase local income by approximately \$470,000.

**LONG-TERM (OPERATIONS PHASE) INCOME EFFECTS**

County income during the operations period would increase primarily as a result of the payroll for operations workers for the Echanis Project, as well as lease payments to private landowners. The Applicant estimated that total employee compensation would be \$450,000 for operations workers. Lease payments from the Echanis Project to the private landowner for the windfarm site were estimated to be \$750,000 annually. These direct income effects would result in approximately \$100,000 of increased household spending at local businesses, and increased income for employees and owners of those businesses.

As noted above, the value of goods and materials purchased by the Applicant during the operations phase would be relatively small (\$20,000 for the Echanis Project). Income at the local businesses that supplied these inputs would not likely increase as a result of expenditures for the Echanis Project.

#### SUMMARY OF INCOME EFFECTS

Table 3.11-14 summarizes the estimated income effects during the construction and operations phases for the Echanis Project. County income from the Echanis Project was estimated to increase by approximately \$4.99 million during the construction period. Long-term annual income during the 40-year operations phase was estimated to increase by \$1.3 million. Table 3.11-14 also presents the total income effect in terms of present value, which represents the value in today's dollars of all Project-related income that would accrue during construction and 40 years of operation.<sup>5</sup> In present value terms, county income over the life of the Project would increase by approximately \$34.0 million.

#### PROPERTY VALUE EFFECTS

Potential effects to property values could occur as a result of the proximity of a parcel to the Echanis Project (i.e., proximity effects), or a view of the Echanis Project from a parcel (i.e., viewshed effects). A scenic view is one of many attributes that determines the value of a home. Assuming any scenic view attributes are integrated into the existing values of homes in the Project Area, those property values could decrease if a wind farm were perceived to adversely affect the quality of a viewshed. Similarly, if wind farms were perceived to benefit viewsheds, property values could increase. Previous studies have found varying property value effects from proximity to and viewshed impairment from wind farms. A review of these studies, presented below, was undertaken to provide a baseline to determine the potential property value effects.

A 2002 study (EcoNorthwest 2002) interviewed tax assessors in counties where wind farms were already located. The tax assessors did not identify any negative effects to property values from wind projects within those counties.

A 2003 study (Sterziner and Kostiuk 2003) conducted a statistical analysis comparing property sales in 10 wind farm viewsheds nationwide (within a 5-mile radius of wind turbines), with comparable property sales in communities outside of the wind farm viewsheds. The study found no support for the claim that wind development would harm property values (Sterziner and Kostiuk 2003). In fact, the study found that property values actually increased more quickly within the wind farm viewsheds than in communities located outside of the wind farm viewsheds, indicating an unexplained positive property value effect from wind farms.

A survey of Nantucket (Haughton and Giuffre 2004) residents and realtors found that 4 percent of homeowners and 4.6 percent of realtors anticipated property values would decrease as a result of wind farm development. This study was based upon opinion and not a rigorous analysis. A subsequent study (Hoen 2006) reviewed the Nantucket findings and suggested that the survey did not predict actual effects upon property values because it was not a statistical analysis. Additionally, the follow-up study conducted a statistical analysis of the effects of the Nantucket wind farm upon property values and found no statistically significant relationship between the wind farm proximity/visibility effect and home sale prices, indicating that wind farm visibility did not affect property values.

A 2009 study measured the impact of wind farms upon residential property values (Hoen et al. 2009) near 24 nationwide wind projects, including three located in the Pacific Northwest. Using advanced statistical analysis, the authors created 10 models to test the impact of wind farms upon residential property values. In particular, the authors examined whether the sale price of homes located adjacent to (i.e., nuisance stigma), nearby but not adjacent to (i.e., area stigma), and in the viewshed (i.e., scenic vista stigma) of wind farms

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<sup>5</sup> Present value is calculated using a three percent discount rate.

were affected. The authors found no significant and consistent measure (i.e., distance to or viewshed of) of wind farms affecting the home prices surrounding a facility.

A survey (Royal Institution of Chartered Surveyors 2005) of real estate professionals in the United Kingdom found that 60 percent of the sample perceived that there had been a decrease in residential property values within a wind farm viewshed. However, 63 percent of the sample perceived that the visibility of a wind farm had no effects upon agricultural land values. This study did not include statistical analyses, but instead presented professional opinions.

A 2006 technical memorandum (DeLacy 2006) evaluated the potential effect of a proposed wind farm upon property values. The memorandum concluded that there was no, to a small negative, potential effect upon property values. However, the study also noted that the positive effect of the Project upon the local economy (e.g., increased jobs, decreased local property taxes, and generated tax revenues for local infrastructure/schools) could outweigh any negative property value effects.

The studies summarized above did not find a significant or consistent relationship between wind energy developments and impacts to property values. The owners of the Echanis Project site would experience viewshed effects but would be voluntarily leasing the site, thus accepting the effects, and also would be compensated with an annual lease payment. However, owners of property located adjacent to the Echanis Project site would not be compensated with lease payments.

Because no residences would be located within 500 feet of the Echanis Project (see Figure 3.11-4, later in this section), there would be no potential proximity/viewshed effects to residents. Although properties within the viewshed of, but not directly proximate to, the Echanis Project could potentially be affected, it is not believed that this would occur because of the rural nature and the reduced visibility of the Project components from relatively long distances (see Section 3.9 Aesthetics). Thus, no property value effects would likely occur from proximity/viewshed impairment from the Echanis Project.

### REVENUE AND FISCAL EFFECTS

Studies have shown there to be positive local fiscal effects from the construction and operation of energy generation projects (Nevada Commission on Economic Development 2005). The fiscal effects of the Echanis Project and transmission line could include changes to government revenues and expenditures. Federal and state tax revenues could be generated by the Echanis Project from income taxes and business taxes. Some of these federally- and state-collected revenues are then redistributed to support the programs and activities of county and city agencies. County revenues also could be affected by the payment of real estate and personal property taxes by the owners of the Project. As with taxes collected by state and federal agencies, taxes collected by the counties are distributed to various levels of local governments and district services, such as town governments, water and sanitation districts, emergency response districts, and school districts, to pay for these services as well as other infrastructure. The expenditure effects upon local agencies could occur from Project-related requirements for public services, including road maintenance and water.

Oregon does not have a sales tax, so no sales tax revenues would be generated by construction or operation of the Project. Although income and business taxes would be generated by the Project, they were not quantified for this EIS. Because these taxes would be generated at the state/federal level and only a relatively small portion would be passed along to county and city agencies, they would likely have a very limited effect upon county and city revenues.

Real estate taxes are based upon the assessed value of a property. A change in land use could affect the assessed value of the land and the applicable real estate tax rate. In the case of the Echanis Project, the real estate tax rate would change as a result of a change in land use from range land to an energy generation facility. Real estate taxes are paid by landowners and, because the Echanis Project site would be leased, the landowner would continue to pay these taxes. Increased real estate tax revenues were estimated to be \$60,000

annually, starting in the first year of operation, and would escalate at three percent annually thereafter, reaching \$190,000 in year 40. (Norling 2008) Over the 40-year life of the Project, this would amount to a total of \$4.5 million in real estate taxes, with a net present value of \$2.3 million (see Table 3.11-15).

**Table 3.11-15 Real Estate and Personal Property Tax Effects for the Echanis Project**

	Real Estate Tax	Personal Property Tax <sup>a</sup>	Present Value over the Life of Echanis	Annualized Payments
Increased Taxes Paid	\$4,520,000	\$35,460,000	\$23,150,000	\$1,560,000
Reduction in School Payments from State	\$0	-\$12,110,000	-\$7,110,000	-\$480,000
Net Increase in Taxes	\$4,520,000	\$23,350,000	\$16,040,000	\$1,080,000

a. Because the Oregon Strategic Investment Program exempts major capital projects from personal property taxes for the first 15 years, these taxes were calculated based upon a 25-year period (out of the 40-year project life).

Personal property tax payments for wind energy projects are based upon the installed capital cost of the wind energy facilities. Personal property tax payments for wind energy projects tend to be a greater source of tax revenues, per installed megawatt, than other types of energy generation because they require greater capital investment. Generally speaking, the tax payments for wind energy projects could range from one to three percent, depending upon the state and jurisdiction. However, in Oregon, the Strategic Investment Program (OSIP) exempts from property taxes a portion of large capital investments, and reduces the personal property taxes paid to a maximum of \$500,000 annually in rural areas like Harney County.

The personal property tax effects of the Echanis Project would vary by year. If the OSIP were not in place, once construction was completed, the taxable value of the Echanis Project would be \$222.1 million. Each subsequent year, the Echanis Project’s taxable value would decrease, ultimately reaching a value of \$27.2 million after 40 years. However, because of the OSIP, a capital project over \$25 million in rural areas is exempt from personal property taxes for the first 15 years of its existence and, thus, the total personal property tax payments made by the Project would be smaller. The Project would still pay a community service fee, equal to 25 percent of the exemption, up to \$500,000.

The \$4.5 million in increased real estate taxes and \$35.5 million in increased personal property taxes would result in an estimated net present value of \$23.1 million, assuming a three percent discount rate. This would be equivalent to an annualized payment of \$1.6 million per year. Subtracting the reduction in school-related funds from the state (see additional discussion below), the total net present value of the increased taxes would be \$16.0 million and the annualized payment would be \$1.1 million (Table 3.11-15). If the Echanis Project operated for more than 40 years, the total present value of tax payments over the new life of the Echanis Project would be greater.

On average, the State of Oregon provides about 53 percent of school funding, mainly from the general fund but also from the lottery funds, and local jurisdictions provide about 36 percent of the funds (for the Project Area, specifically, it is 34.15 percent). The remaining 11 percent is provided by the Federal Government. This system was created by Measure 5 in 1990, as amended by Measure 50 in 1997, and by Measure 1 in 2000. Specifically, Measure 1 requires the state legislature to “appropriate in each biennium a sum of money sufficient to ensure that the state’s system of public education meets quality goals established by law.” Therefore, regardless of a school district’s property tax receipts, its schools would receive the necessary funding, as determined by the state. (Oregon Blue Book 2008) The school funding system also requires that whenever property values increase in a particular school district, resulting in increased personal property tax revenue for that district, the state funding that the district receives is decreased by the same amount.

The total personal property tax payments over the 40-year life of the Project were estimated to be \$35.5 million (see Table 3.11-15). However, as indicate above, the increase in local property tax receipts would not result in a dollar for dollar increase in benefits to schools because they would result in a \$12.1 million

decrease in state funds for those schools. Thus, the net fiscal benefit to the county was estimated to be tax receipts totaling \$23.3 million (or 66 percent of the total generated property taxes) over 40 years. Therefore, about one-third of the increased property tax revenue would be matched by a decrease in state funding (in effect, this is a benefit to the state). In present value terms, this would be a \$9.0 million increase in tax revenues to the county.

Overall, the effect of the Echanis Project to other community services would likely be negligible. The increase in public service demands would either be funded directly by the Applicant or would be met locally by public service providers paid by the Applicant. Therefore, the net fiscal effects would likely equal the additional tax revenues generated by the Echanis Project.

### LIFESTYLE AND SOCIAL VALUES

Construction and operation of the Echanis Project would result in the addition of a new element to the visual landscape of the area, and thus a change in the perception of the area as being open and rural. While some people have perceived other wind farm developments to be positive because they represent generating energy in a more harmonious manner with nature, others have viewed them negatively as large industrial facilities located in former pastoral or undeveloped areas. The extent of the impacts would be dependent upon the number of people affected, their use of the area (i.e., landowner, worker, and recreationist), and one's perception of these types of facilities. An assessment of the potential visual effects is provided in Section 3.9 Aesthetics, An assessment of the recreational impacts is provided in Section 3.7 Recreation and an assessment to solitude and other wilderness values is provided in Section 3.13 Wilderness.

### MITIGATION

Because there would be no negative effects to social and economic values and environmental justice, no mitigation measures are recommended.

#### **3.11.3.3 Alternative B – West Route (Proposed Action)**

The economic effects of a transmission line (the Project) are similar to other developments that have a construction phase, as well as on-going operations. These types of projects typically provide an initial, short-term boost to the local economy during Project construction as goods and services are purchased locally and local labor is used. Once construction was completed, Project operations would provide extended local economic benefits through spending for goods, services, lease payments, and labor that would support long-term operations.

#### ***Social and Economic Effects***

For the construction and operations phases, there would be three primary sources of employment and income effect to the county, including direct increased employment and income from Project employment (direct effect), increased employment and income at county businesses supplying goods and services for Project use (indirect effect), and increased employment and income at businesses receiving household spending resulting from Project-related wages (induced effect).

### EMPLOYMENT

The estimates of employment effects represent the total number of jobs, including full and part-time, that would likely be created from the Project. Total employment was estimated first for the construction phase and then for the operations phase of the Project.

**SHORT-TERM (INITIAL CONSTRUCTION PHASE) EMPLOYMENT EFFECTS**

The initial construction phase employment effects to the county would be primarily from labor hired to construct the initial single-circuit transmission line for the Project. Based upon payroll figures, it was estimated that approximately 100 employees would be hired for the five-month construction period of the Alternative B transmission line (see Table 3.11-16). The Applicant estimated that approximately 50 of those transmission line workers would be local residents (Norling and Kane 2009). The remaining construction workers would likely be temporary residents that would relocate for the initial construction phase of the Project.

**Table 3.11-16 Employment Effects for Alternative B – West Route**

	Construction Phase (Up to 1 Year)	Operations Phase (Annually for 40 Years)
<b>Alternative B – West Route</b>		
Direct	100	15
Indirect	15	0
Induced	15	0
<b>Total</b>	<b>130</b>	<b>15</b>

Note: Figures may not sum to total due to rounding

Local jobs would also be supported by Project-related expenditures for goods and materials used to build the Project (i.e., indirect effect; see Short-term Income Effects for more details, below). This increased demand for local goods and services resulting from spending for Alternative B transmission line would likely generate 15 additional jobs.

In addition to the jobs directly and indirectly generated by the Project, employment would be generated or supported in other sectors, when construction employees spent their wages at businesses in the county (i.e., induced effects). The induced effect would likely be greater for workers who were permanent county residents than for workers who had temporarily relocated into the county for the construction period (see Short-term Income Effects, below). Additionally, local employment would increase as a result of increased household income and associated spending from one-time transmission line ROW payments paid to local landowners whose property would be crossed. In total, increased household spending as a result of spending for the Alternative B transmission line (induced effects) was estimated to generate 15 additional jobs.

Total employment effects during the five months to construct Alternative B transmission line were estimated to be 130 jobs.

**SHORT-TERM (FUTURE CONSTRUCTION PHASE – UPGRADE TO 230-kV) EMPLOYMENT EFFECTS**

The upgrade of the initial single-circuit transmission line to a double-circuit 230-kV transmission line would require a second construction phase at a future date, when additional capacity was required on the transmission line. During the second construction phase, the local area would experience the same temporary construction related effects as described above, including the same type of increase in employment as for the first phase of construction.

**LONG-TERM (OPERATIONS PHASE) EMPLOYMENT EFFECTS**

During the operations phase of the Project, maintenance and operations jobs would be generated. The Applicant estimated that the Alternative B transmission line would directly employ one approximately 15 worker (see Table 3.11-16; Norling and Kane 2009). Because annual Project spending for local goods and services and increased household spending would be minimal (see

Long-term Income Effects), it is unlikely that employment opportunities would be created from these purchases.

**INCOME**

Income effects include total labor income from those employed by the Project, as well as profits to business owners and wages to employees from the additional income accruing from Project-related expenditures.

**SHORT-TERM (INITIAL CONSTRUCTION PHASE) INCOME EFFECTS**

Similar to employment, labor income and expenditures for materials for construction would be a temporary benefit to the local economy. The Applicant estimated that they would spend \$2.0 million for payroll and the purchase of materials and services (i.e., direct income) to construct the Alternative B transmission line over five months (see Table 3.11-17). Potential materials and services could include fuel, truck transport, road construction, transmission line work, and general maintenance and construction (Norling and Kane 2009). Additionally, local income would increase during the construction period as a result of one-time transmission line ROW payments of approximately \$580,000, made to local landowners whose property would be crossed (Norling and Kane 2009). This direct income would total \$2.58 million (see Table 3.11-17).

**Table 3.11-17 Income Effects for Alternative B – West Route**

	One-Time Construction	Annual Operations	Present Value Over 40 Years
<b>Alternative B – West Route</b>			
Direct	\$2,580,000	\$590,000	<u>\$15,640,000</u>
Indirect	\$630,000	\$70,000	<u>\$2,170,000</u>
Induced	\$330,000	\$60,000	<u>\$1,560,000</u>
<b>Total</b>	<b>\$3,540,000</b>	<b>\$710,000</b>	<b><u>\$19,360,000</u></b>

Note: Figures may not sum to total due to rounding

Local businesses supplying the Project with the above materials and services would realize increased income for their owners and employees. This indirect income effect, estimated to be \$630,000 for transmission line construction, would most notably occur to businesses providing maintenance and transportation-related services or goods.

Spending by construction workers employed by the Project (i.e., induced income) would also generate income at businesses providing the needed goods and services, which would include grocery stores, restaurants, hotels, and gas stations. Non-resident construction workers were estimated to spend approximately \$1,400 per month at these businesses in the county. (Norling and Kane 2009) Spending by resident workers was estimated using average household consumption patterns.<sup>6</sup> It was estimated that spending by Alternative B transmission line construction workers would increase local income by \$330,000 (see Table 3.11-17).

Thus, the total increase in indirect and induced income associated with the increase in household spending/income would be approximately \$1.0 million.<sup>7</sup>

<sup>6</sup> Local payroll is analyzed in IMPLAN sector 5001, employee compensation.

<sup>7</sup> Note that employment effects of this increased income would likely be spread out over several years, rather than being experienced solely during the construction period.

### SHORT-TERM (FUTURE CONSTRUCTION PHASE- UPGRADE TO 230-kV) INCOME EFFECTS

The upgrade of the initial single-circuit transmission line to a double-circuit 230-kV transmission line would require a second construction phase at a future date, when additional capacity was required on the transmission line. During the second construction phase, the local area would experience the same temporary construction related effects as described above, including the same type of increase in income as for the first phase of construction.

### LONG-TERM (OPERATIONS PHASE) INCOME EFFECTS

County income during the operations period would increase primarily from wages paid to operations workers of the Alternative B transmission line. The Applicant estimated that total employee compensation to operations workers would be \$590,000 for the Alternative B transmission line. These direct income effects of the transmission line would result in increased household spending at local businesses, and would increase the income of employees and owners of those businesses by approximately \$60,000.

As noted above, the value of goods and materials purchased by the Project during the operations phase would be \$150,000 for the transmission line and would result in an increase in income at local businesses that supplied those goods and materials. Additionally, there would be an estimated \$70,000 increase in income from maintenance expenditures for the transmission line.

### SUMMARY OF INCOME EFFECTS

Table 3.11-17 presents the estimated income effects of the Project during the construction and operations phases for the Alternative B transmission line. County income would likely increase by approximately \$3.5 million during construction of the transmission line. Long-term annual income was estimated to increase by \$0.7 million during the 40-year operations phase. Table 3.11-17 also presents the total income effects, in terms of present value (i.e., the value in today's dollars of all Project-related income that would accrue during construction and 40 years of operations). In terms of present value, county income over the life of the Project would increase by approximately \$19.4 million.

### PROPERTY VALUE EFFECTS

A 1995 study (Chalmers and Voorvaart 2009) in Vancouver, B.C., found that transmission lines had no significant viewshed effects upon residential property values located within 656 feet of, but not adjacent to, the line. Another study of the effects in Vancouver, B.C. (Hamilton and Schwann 1995) found that home values decreased from 0.04 to 2.05 percent.

A third study (Bottemiller et al. 2000) estimated still greater negative home value effects of 5 to 12 percent for homes located 165 to 325 feet from a transmission line ROW. This study found no property value effects beyond 325 feet.

A 2009 study (Chalmers and Voorvaart 2009), that reviewed previous studies investigating the effects of transmission lines upon property values, concluded that about half of the literature found no effects from transmission lines and about half found a negative effect upon property values. Those finding negative effects to property values generally found an effect of 3 to 6 percent, and always less than 12 percent. Moreover, the literature concluded that the effects disappeared within 200 to 300 feet.

Property value effects could occur from proximity to or a view of the Project. As indicated previously, studies have found varying effects of proximity and viewshed impairment from transmission lines. Many studies found no notable effect of transmission lines upon home values; while those that did estimate an effect, generally expected them to be minor (a decrease of zero to 12 percent). Additionally, no homes would

be located within 500 feet of the Alternative B – West Route transmission line, further suggesting that there would be no effects to residential home values because the studies generally found no effects beyond 325 feet (see Figure 3.11-4). As a result of the findings of these studies, no effects would likely occur to home values from the transmission line. Additionally, if there were any effects upon home values, they would not be realized until the home was sold.

#### REVENUE AND FISCAL EFFECTS

Oregon does not have a sales tax, so no sales tax revenues would be generated by construction or operation of the Project. Although income and business taxes would be generated by the Project, they were not quantified for this EIS. Because these taxes would be generated at the state/federal level and only a relatively small portion would be passed along to county and city agencies, they would likely have a very limited effect upon county and city revenues.

Property owners within the transmission line easement would be compensated with a one-time payment for an easement on their land. The owner of the transmission line would be liable for paying the property taxes for the transmission line asset, not the land owners. (Oregon Department of Revenue 2008) The transmission line could impact the use of the leased property, thereby affecting its assessed value or real estate tax rate. Because of the small footprint of the transmission line, changes to the leased land would likely have little to no effect upon local real estate taxes.

#### LIFESTYLE AND SOCIAL VALUES EFFECTS

Construction and operation of Alternative B would result in the addition of a new element to the visual landscape of the ROW, but one that was not uncommon to see in rural areas and which would fade into the vista once it was beyond the foreground views. The extent of the impacts would be dependent upon the number of people affected and their use of the area (i.e., landowner, worker, and recreationist). Because Sections 3.9 Aesthetics and Section 3.7 Recreation did not predict significant, unmitigated changes in those resources, no significant changes in the associated lifestyle would be expected.

### *South Diamond Lane Route Option*

#### SOCIAL AND ECONOMIC EFFECTS

The potential effects of the South Diamond Lane Route Option would likely be equivalent to the effects estimated for Alternative B – West Route. Although the two routes have a different alignment at the west end, their total length is very similar (the South Diamond Lane Route is less than five percent shorter). This indicates that total construction and operation expenditures, and thus economic effects, should be approximately equal for the two routes.

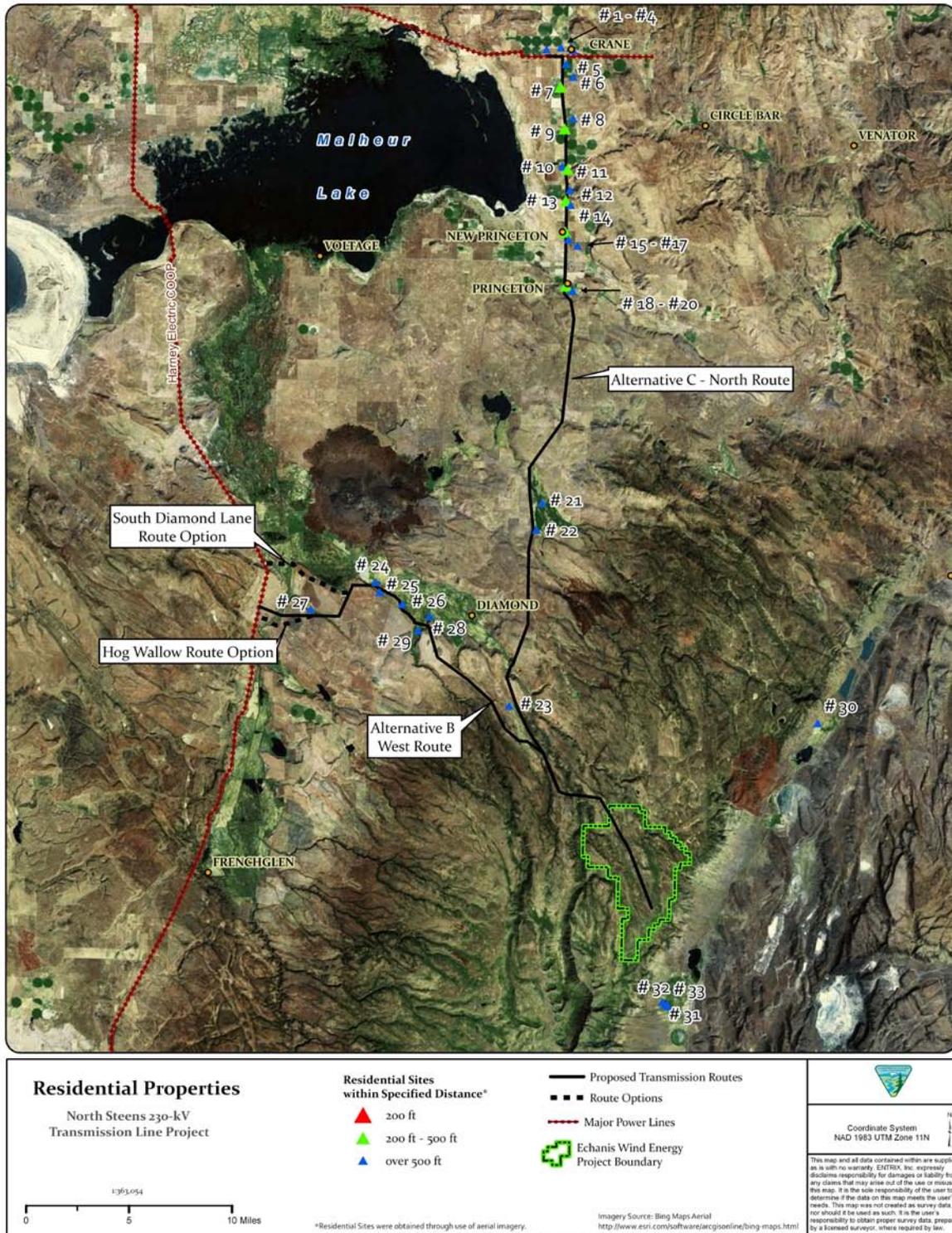


Figure 3.11-4 Residential Properties Near the Transmission Line.

### *Hog Wallow Route Option*

#### SOCIAL AND ECONOMIC EFFECTS

The potential effects of the Hog Wallow Route Option would likely be equivalent to the effects estimated for Alternative B – West Route. Although the two routes have a different alignment at the west end, their total length would very similar (the Hog Wallow Route Option would be less than one percent longer). This indicates that total construction and operation expenditures, and thus economic effects, should be approximately equal for the two routes.

### *115-kV Transmission Line Option*

#### SOCIAL AND ECONOMIC EFFECTS

The potential effects of the 115-kV Transmission Line Option would likely be equivalent to the effects estimated for Alternative B – West Route. The line location, pole heights, pole spacing, ROW widths, construction methods, interconnection points, and access requirements would be the same as for the Alternative B route options described above, creating no additional social and economic effects.

#### MITIGATION

Because there would be no negative effects to social and economic values and environmental justice, no mitigation measures are recommended.

### 3.11.3.4 Alternative C – North Route (Preferred Alternative)

#### *Social and Economic Effects*

Because of the greater length of Alternative C – North Route, the expected economic effects would be greater than for Alternative B. The Applicant estimated that the payroll cost of constructing the Alternative C transmission line would be \$4.0 million, compared to \$2.0 million for Alternative B. Similarly, the transmission line expenditures for local goods and services during construction were estimated to be \$4.0 million, compared to \$2.0 million for Alternative B (Kane and Norling 2010c). Also, due to the longer length, the Applicant estimated that expenditure on local goods and services during the operations phase would also be twice as high, at \$300,000 annually (compared to \$150,000 annually for Alternative B). Finally, the one-time payments for the transmission line ROW would also increase from \$580,000 for Alternative B to an estimated \$1.0 million for Alternative C.

Apart from adjusting these estimates of payroll, ROW payments, and local goods and services expenditures, the methodology used to estimate the effects of Alternative C was the same as the methodology used to estimate the effects of Alternative B.

#### EMPLOYMENT

Employment for the construction and operations phases of the Project would be greater under Alternative C than under Alternative B, because of the greater length of the transmission line.

**SHORT-TERM (INITIAL CONSTRUCTION PHASE) EMPLOYMENT EFFECTS**

The construction time period for Alternative C would be approximately 8 months and employ 60 workers with 50 percent of those jobs (30 jobs) being filled by county residents and the payroll would increase by 160% (see Table 3.11-18).

~~Despite the greater transmission line length, the Applicant estimated that the construction time period would be shorter for Alternative C (approximately four months rather than five months for Alternative B). Thus, although the payroll for transmission line construction would double, due to the shorter construction timeframe, the employment would increase by more than double to approximately 260 jobs (compared to 100 jobs in Alternative B, see Table 3.11-18). The Applicant estimated that approximately 50 percent of these jobs (130 jobs) would be filled by county residents.~~

**Table 3.11-18 Employment Effects for Alternative C – North Route**

	Construction (Up to 1 Year)	Operations (Annually for 40 Years)
Alternative C - North Route		
Direct	260.60	15.1
Indirect	35.8	5.03
Induced	25.6	0
<b>Total</b>	<b>320.74</b>	<b>20.13</b>

Note: Figures may not sum to total due to rounding

Employment generated by Project-related construction spending for local goods and services (i.e., indirect) was estimated to be 35 jobs, while the employment generated by increased spending by Project construction workers (i.e., induced) was estimated to be 25 jobs. Thus, the total employment associated with the Alternative C transmission line construction would be 320.74 jobs, compared to 130 jobs for Alternative B.

**SHORT-TERM (FUTURE CONSTRUCTION PHASE – UPGRADE TO 230-kV) EMPLOYMENT EFFECTS**

The upgrade of the initial single-circuit transmission line to a double-circuit 230-kV transmission line would require a second construction phase at a future date, when additional capacity was required on the transmission line. During the second construction phase, the local area would experience the same temporary construction related effects as described above, including the same type of increase in employment as for the first phase of construction.

**LONG-TERM (OPERATIONS PHASE) EMPLOYMENT EFFECTS**

The Applicant would hire approximately 15 workers to maintain the Alternative C transmission line (equivalent to Alternative B, see Table 3.11-18). However, total operations employment under Alternative C would be slightly greater from increased operations spending for local goods and services (\$300,000 annually as opposed to \$150,000 annually for Alternative B). This spending would likely result in approximately five indirect jobs being generated at county businesses that supplied goods and services to the Project. Total operations employment thus was estimated to be 20 jobs.

**INCOME**

Income for the construction and operations phases would be greater under Alternative C than under Alternative B because of the greater length of the transmission line.

**SHORT-TERM (INITIAL CONSTRUCTION PHASE) INCOME EFFECTS**

Similar to employment, labor income generated during construction would be a temporary benefit for the local economy. Project payroll for the four-month construction of Alternative C transmission line was estimated by the Applicant to be \$4.0 million (compared to \$2.0 million for Alternative B, see Table 3.11-19). Additionally, local income would increase during the construction period as one-time transmission line ROW payments were made to local landowners, totaling approximately \$1.0 million (compared to \$580,000 in Alternative B). This would result in total direct income from construction of about \$5.0 million (see Table 3.11-19).

**Table 3.11-19 Income Effects for Alternative C – North Route**

	Construction	Operations	Present Value
<b>Alternative C – North Route</b>			
Direct	\$5,040,000	\$590,000	<u>\$18,020,000</u>
Indirect	\$1,280,000	\$140,000	<u>\$4,350,000</u>
Induced	\$630,000	\$60,000	<u>\$1,990,000</u>
<b>Total</b>	<b>\$6,950,000</b>	<b>\$790,000</b>	<b><u>\$24,370,000</u></b>

Note: Figures may not sum to total due to rounding

Income generated by Project-related construction spending for local goods and services was estimated to be \$1.3 million, while the construction employment generated by increased spending by Project workers was estimated to be \$630,000. The total income associated with the construction of Alternative C transmission line was thus estimated to be \$7.0 million, compared to \$3.5 million for the Alternative B transmission line.

**SHORT-TERM (FUTURE CONSTRUCTION PHASE – UPGRADE TO 230-kV) INCOME EFFECTS**

The upgrade of the initial single-circuit transmission line to a double-circuit 230-kV transmission line would require a second construction phase at a future date, when additional capacity was required on the transmission line. During the second construction phase, the local area would experience the same temporary construction related effects as described above, including the same type of increase in income as for the first phase of construction.

**LONG-TERM (OPERATIONS PHASE) INCOME EFFECTS**

The Applicant estimated that payroll costs for operation of the Alternative C transmission line would total approximately \$590,000 (see Table 3.11-19). However, total operations income under Alternative C would be slightly greater because of increased operations spending for local goods and services (\$300,000 annually, as opposed to \$150,000 annually for Alternative B). This spending would likely result in approximately \$140,000 of indirect income generated at county businesses that supplied goods and services to the Project. Induced income generated by increased household spending at local businesses also would increase slightly to \$60,000. Total operations employment thus was estimated to be \$790,000.

**SUMMARY OF INCOME EFFECTS**

Table 3.11-19 presents the estimated income effects of the Project during the construction and operations phases for the Alternative C transmission line. County income would likely increase by approximately \$7.0 million during construction of the transmission line. Long-term annual income

was estimated to increase by \$0.8 million during the 40-year operations phase. Table 3.11-19 also presents the total income effects, in terms of present value (i.e., the value in today's dollars of all Project-related income that would accrue during construction and 40 years of operations). In terms of present value, county income over the life of the Project would increase by approximately \$24.4 million.

#### PROPERTY VALUE EFFECTS

The property value effects of the Alternative C route would likely be the same or slightly greater than the effects of the Alternative B – West Route. Although the literature review generally indicated that transmission lines typically had little or no effect upon property values, limited studies did find a potential minor negative effect for homes within 325 feet. Seven homes would be located within 500 feet of the Alternative C route (see Figure 3.11-5) and thus could be affected by the transmission line.

#### REVENUE AND FISCAL EFFECTS

Fiscal effects for the Alternative C would likely be equivalent to the effects estimated for Alternative B – West Route. Although the two routes have different alignments, the taxes imposed upon the utility asset owner and leased landowner would be the same.

#### LIFESTYLE AND SOCIAL VALUES

Construction and operation of Alternative C would result in the addition of a new element to the visual landscape of the ROW, but one that is not uncommon to see in rural areas and which fades into the vista once it is beyond the foreground views. The extent of the impacts would be dependent upon the number of people affected and their use of the area (i.e., landowner, worker, and recreationist). Because Sections 3.9 Aesthetics and Section 3.7 Recreation did not predict significant, unmitigated changes in those resources, no significant changes in the associated lifestyle would be expected.

#### MITIGATION

Because there would be no negative effects to social and economic values and environmental justice, no mitigation measures are recommended.

### 3.11.3.5 Residual Effects after Mitigation

There would be no anticipated residual effects to social and economic values and environmental justice from the Project

### 3.11.3.6 Summary Comparison of Alternatives

The effects to social and economic values and environmental justice from development of the Echanis Project, primary access road, and each alternative are summarized in Table 3.11-20.

**Table 3.11-20 Summary of Effects - Social and Economic Values, Environmental Justice**

Alternative A – No Action	Echanis Wind Energy Project	Alternative B			Alternative C – North Route (Preferred Alternative)
		West Route (Proposed Action)	South Diamond Lane Route Option	Hog Wallow Route Option	
<p>No Action would lead to Harney County not receiving the potential employment, income, and output benefits created by the proposed Project.</p> <p>Additionally, the tax benefits of the Project would not be collected by the county under the No Action Alternative.</p>	<p>Short-term employment would consist of 100 employees for 9 months, of which 30 would be local residents.</p> <p>Employment would be generated or supported in other sectors as construction employees spend their wages at businesses in the county (induced effects). Non-resident construction workers are estimated to spend approximately \$1,400 per month on lodging, food, and gas.</p> <p>Increased household spending would generate approximately 15 jobs. Local jobs would also be supported by expenditure on goods and materials for the Project (indirect effect).</p> <p>Approximately \$3.5 million of local goods and services would be required for Project construction which is expected to generate approximately 30 jobs.</p> <p>Long-term employment for operations would consist of 10 workers. Employment opportunities resulting from purchase of Project-related materials is estimated at \$20,000 annually.</p> <p>Household spending of income from ROW lease payments during the operations phase are expected to generate approximately 5 jobs in the county.</p> <p>Short-term income from Project construction is estimated at \$3.5 million. Businesses that supply goods and services to the Project would receive indirect income effects estimated at \$1.0 million. Businesses such as grocery stores, restaurants, hotels, and gas stations are expected to receive an increase in local income by approximately \$470,000.</p> <p>Long-term income from Project operations would arise from employee compensation to operations workers (estimated at \$450,000 annually) and lease payments to private landowners (estimated at \$750,000) annually. These effects would result in increased household spending at local businesses, and raises</p>	<p>Short-term employment hired to construct the initial single-circuit transmission line for the Project would consist of 100 employees for 3 months, of which 50 would be local residents.</p> <p>Employment would be generated or supported in other sectors as employees spend wages at businesses in the county (induced effects). Non-resident workers are estimated spend approximately \$1,400 per month on lodging, food, and gas.</p> <p>Increased household spending is expected to generate approximately 15 jobs.</p> <p>Long-term employment hired for maintenance and operations jobs would consist of 15 workers. Employment opportunities resulting from purchase of Project-related materials is estimated at \$150,000 annually. Some employment is expected to result from increased household spending due to Project-related income.</p> <p>Short-term income from Project payroll for construction is estimated to be \$2.0 million. Local income would increase during the construction period as one-time ROW payments are made to local households, totaling approximately \$580,000.</p> <p>Businesses that supply goods and services to the Project would receive indirect income effects estimated at \$630,000. Spending by construction workers is</p>	<p>Effects for the South Diamond Lane Route Option are expected to be equivalent to the effects estimated for Alternative B – West Route.</p> <p>Although the two routes have a different alignment on the west end, their total length is very similar (the South Diamond Lane Route is less than 5% shorter). This indicates that total construction and operation expenditures, and thus economic effects, should be approximately equal for the two routes.</p>	<p>Effects for the Hog Wallow Route Option are expected to be equivalent to the effects estimated for Alternative B – West Route.</p> <p>Although the two routes have a different alignment on the west end, their total length is very similar (the Hog Wallow Route is less than 1% longer). This indicates that total construction and operation expenditures, and thus economic effects, should be approximately equal for the two routes.</p>	<p>Short-term employment hired to construct the transmission line for the Project would consist of <del>260</del> <u>60</u> employees for 3 months, of which 130 would be local residents.</p> <p>Employment generated by Project-related construction spending on local goods and services is estimated at 35 jobs, while the employment generated by increased spending by Project construction workers is estimated at 25 jobs.</p> <p>Long-term employment hired for maintenance and operations would be <u>15</u> workers. Employment opportunities resulting from purchase of Project-related materials is estimated at \$300,000 annually, which is expected to generate approximately 5 jobs.</p> <p>Short-term income from Project payroll for construction is estimated to be \$4.0 million. Local income would increase during the construction period as one-time ROW payments are made to local households, totaling approximately \$1.0 million.</p> <p>Income generated by Project-related construction spending on local goods and services is estimated at \$1.3 million, while the construction employment generated by increased spending by</p>

**Table 3.11-20 Summary of Effects - Social and Economic Values, Environmental Justice**

Alternative A – No Action	Echanis Wind Energy Project	Alternative B			Alternative C – North Route (Preferred Alternative)
		West Route (Proposed Action)	South Diamond Lane Route Option	Hog Wallow Route Option	
	<p>income by employees and owners of these businesses by approximately \$100,000.</p> <p>The value of goods and materials purchased during the operations phase would be approximately \$20,000, and income at local businesses that supply these inputs is not expected to increase.</p> <p>No property value effects are estimated for wind farm proximity/viewshed impairment.</p> <p><u>An estimated \$4.5 million is expected in increased real estate taxes and \$35.5 million in increased property taxes. The net present value of these is estimated at \$23.2 million. Subtracting the reduction in school-related funds from the state, the total net present value of the increased taxes is \$16.0 million and the annualized payment is \$1.08 million. If the Project exists for longer than 40 years, the total present value of value of tax payments over the life of the Project would be higher.</u></p> <p>This analysis did not identify disproportionately high or adverse effects to minority or low-income groups.</p> <p>A new element would be added to the visual landscape of the area, and thus a change in the perception of the area as being open and rural. Some people would perceive Echanis positively because it would represent generating energy in a more harmonious manner with nature, others would view it negatively as a large industrial facility located in former pastoral or undeveloped area.</p>	<p>expected to increase local income by \$330,000.</p> <p>Long-term income from Project operations would arise from payroll to operations workers amounting to \$590,000, which would result in increased household spending at local businesses, and raises income by employees and owners of these businesses by approximately \$60,000.</p> <p>The value of goods and materials purchased by the Project during the operations phase is approximately \$150,000 and would result in a slight income increase at local businesses suppliers. There would be an estimated \$70,000 increase in income due to maintenance expenditures.</p> <p>This would result in the addition of a new element to the visual landscape of the ROW, but one that is not uncommon to see in rural areas and which fades into the vista once it is beyond the foreground views.</p>			<p>Project workers is estimated at \$600,000.</p> <p>Long-term income from Project operations as payroll to operations workers amounts to \$590,000, which would result in increased household spending at local businesses, and raises income by employees and owners of these businesses by approximately \$140,000.</p> <p>Fiscal effects for this option are expected to be equivalent to the effects estimated for Alternative B – West Route. Although the two routes have a different alignment, the taxes imposed on the utility asset owner and leased landowner would be the same.</p> <p>This would result in the addition of a new element to the visual landscape of the ROW, but one that is not uncommon to see in rural areas and which fades into the vista once it is beyond the foreground views</p>