Economic Impact Assessment of the Horse Heaven Wind Farm

Benton County, Washington

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EXECUTIVE SUMMARY

Horse Heaven Wind Farm, LLC, a fully owned subsidiary of Scout Clean Energy LLC (Scout), is proposing to construct and operate the Horse Heaven Wind Farm (Project), a renewable energy project located in unincorporated Benton County, Washington. Located in the Horse Heaven Hills area, at its closest point, the Project Lease Boundary area is located approximately 4 miles south/southwest of Kennewick and the larger Tri-Cities urban area.

The Project would have a nameplate generating capacity of up to 1,150 megawatts and consist of a combination of wind and solar facilities, along with one or more battery energy storage systems. The exact combination of facilities will depend on the final wind turbine generator (Turbine) models and solar modules selected, with Scout presently seeking to permit a range of technologies to preserve design flexibility. The Project may be built in phases, with the first phase planned for a single construction season in 2023 and a second phased planned for the following season, in 2024.

This report, prepared on behalf of Scout, assesses the economic and fiscal impacts of construction and operation of the Project. Regional economic impacts are estimated for the Tri-Cities area, which is also known as the Kennewick-Richland Metropolitan Statistical Area (MSA) and consists of the Washington counties Benton and Franklin. Economic impacts are assessed in terms of employment, labor income, and economic output using the IMPLAN economic modeling package, with separate analyses presented for construction and operation. The fiscal impact analysis estimates local tax revenues that would be expected to accrue as a result of Project construction and operation.

- Project construction would generate substantial short-term economic benefits in Benton and Franklin counties. Construction of Phase 1 of the Project is estimated to support 458 total (direct, indirect, and induced) jobs in Benton and Franklin counties and approximately $37.0 million in labor income, with total economic output of approximately $70.6 million. During Phase 2, Project construction is estimated to support approximately 472 to 539 total jobs and approximately $37.6 million to $41.9 million in labor income, with total economic output of approximately $73.0 million to $85.7 million.
- Project operation would provide long-term annual economic benefits in Benton and Franklin counties. Operation of Phase 1 of the Project is estimated to support approximately 32 total (direct, indirect, and induced) jobs in Benton and Franklin counties and approximately $2.4 million in labor income, with total economic output of approximately $5.5 million. Operation of Phase 2 is estimated to support 24 to 26 total jobs, an estimated $1.8 million to $2.1 million in labor income, and total economic output of $4.1 million to $5.2 million. These annual impacts are expected to occur each year the Project operates.
- Project operation would increase property tax revenues collected in Benton County. During its first full year of operation Phase 1 would generate an estimated $10.4 million in annual property taxes, an increase of 4.1 percent over current property tax revenues. Operation of Phase 2 would generate an additional $9.0 million in property tax revenues, a further increase 3.5 percent over current property tax revenues. Together, both phases would generate almost $20 million in property tax revenues during the first year of operation, an increase of 7.6 percent over current levels.
- Over the 35-year operating life of the Project, Phase 1 would generate an estimated total of $140.6 million in property tax revenues. Operation of Phase 2 would generate an additional $121.7 million to $122.3 million in total property tax revenues over the same period.

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1 PROJECT OVERVIEW

Horse Heaven Wind Farm, LLC, a fully owned subsidiary of Scout Clean Energy LLC (Scout), is proposing to construct and operate the Horse Heaven Wind Farm (Project), a renewable energy project located in unincorporated Benton County, Washington. Located in the Horse Heaven Hills area, at its closest point, the Project Lease Boundary area is located approximately 4 miles south/southwest of Kennewick and the larger Tri-Cities urban area (Figure 1).[1]

The Project would have a nameplate generating capacity of up to 1,150 megawatts (MW) and consist of a combination of wind and solar facilities, along with one or more battery energy storage systems (BESS). The exact combination of facilities will depend on the final wind turbine generator (Turbine) models and solar modules selected, along with the desired generation profile from the eventual power purchaser. Scout is presently seeking to permit a range of technologies to preserve design flexibility.

This report, prepared on behalf of Scout, assesses the economic and fiscal impacts of the Project. Regional economic impacts are estimated for the Tri-Cities area, which is also known as the Kennewick-Richland Metropolitan Statistical Area (MSA) and consists of Benton and Franklin counties, Washington.[2] Economic impacts are assessed in terms of employment, labor income, and economic output using the IMPLAN economic modeling package, with separate analyses presented for construction and operation. The fiscal impact analysis estimates local tax revenues that would be expected to accrue as a result of Project construction and operation.

For the purposes of analysis, Scout has developed a representative development scenario that assumes that the Project would be built in two Phases, with each Phase representing a distinct and fully functional subset of the larger Project. Two alternatives (Alternatives A and B) are identified for Phase 2 to identify a range of possible impacts that could occur as a result of the Project. Impacts are estimated separately for Phase 1 and Phases 2a and 2b.

- Phase 1 is assumed to have a nameplate capacity of up to 650 MW, with 350 MW generated via wind and 300 MW alternating current (MWac) generated via solar. Phase 1 also includes a BESS capable of storing up to 150 MW of energy.
- Phase 2 is assumed to have a nameplate capacity of up to 500 MW. Alternative A (also referred to as Phase 2a) would consist of both wind and solar facilities, with each resource generating up to 250 MW of energy. Phase 2a also includes a BESS capable of storing up to 150 MW of energy. Alternative B (also referred to as Phase 2b) would generate up to 500 MW via wind and would not include a BESS.[3]

[1] The Project Lease Boundary area encompasses more than 70,000 acres and represents the full geographic extent of the parcels that the Project has an executed lease for. The actual Project footprint would be significantly smaller. The wind energy siting corridors and solar siting areas presently under consideration together include less than a third of the total acres.

[2] MSAs consist of integrated geographic regions typically made up of an urbanized economic core and economically related counties (Office of Management and Budget 2020). The Tri-Cities of Kennewick, Pasco, and Richland are the core of the Kennewick-Richland MSA. Benton and Franklin counties are the economically related counties that share a high degree of economic integration with the urbanized core and one another. The cities of Kennewick and Richland are located in Benton County; the city of Pasco is located in Franklin County.

[3] Phase 2a and 2b represent two potential 500 MW scenarios. Other Phase 2 development scenarios are possible, including an all solar alternative, with up to 500 MW of energy generated by solar. An all-solar alternative is not considered in detail here, but preliminary review suggests that the total installed cost and construction workforce loading for an all-solar alternative would be similar to those evaluated for Phase 2a and 2b.

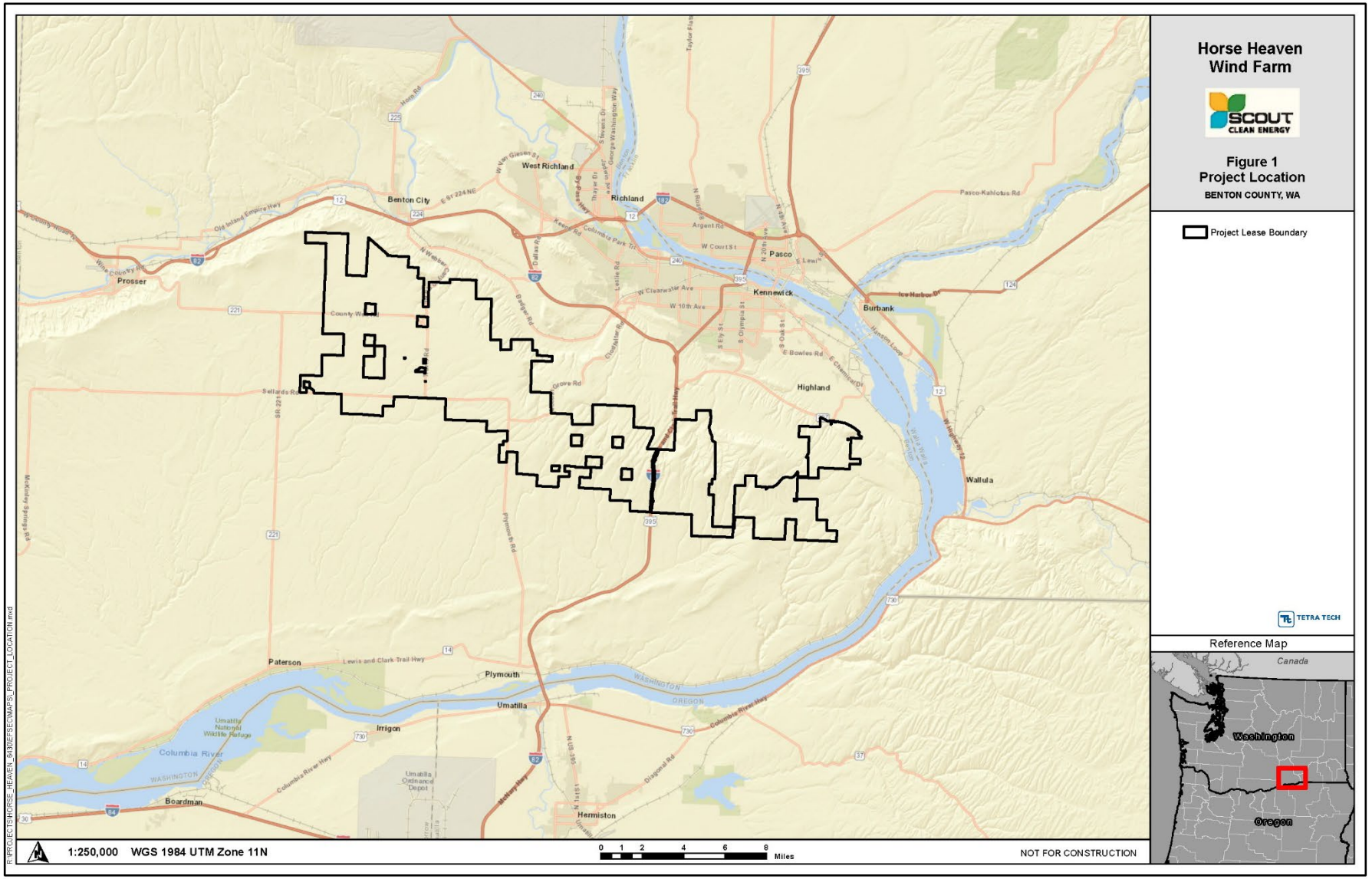
Each Phase would also include substation and transmission line facilities, as well as an operations and maintenance (O&M) facility. The key components for each phase are summarized in Table 1.

Construction of each Phase is assumed to take place during a single construction season, with Phase 1 taking place in 2023, followed by Phase 2 in 2024.

Table 1. Project Construction Phasing Components

Project Components	Phase 1	Phase 2	
		Alternative A (Phase 2a)	Alternative B (Phase 2b)
Energy Generation	650 MW, with 350 MW generated via wind and 300 MWac generated via solar.	500 MW, with 250 MW generated via wind and 250 MWac generated via solar	500 MW generated via wind
Battery Energy Storage System (BESS)	150 MW BESS (600 MW-hour) located at the HH-East Project substation	150 MW BESS (600 MW-hour) located at the BPA Webber Canyon primary substation	
BPA Point of Interconnection (POI) Location	Bofer Canyon Substation	Webber Canyon primary or alternate (north) substation location	Webber Canyon primary or alternate (north) substation location
Project Substations	HH-East Project substation	• HH-West Project Intermediate substation, collects and steps up to 230 kV • HH-West Step-Up Project substation (adjacent to BPA Webber Canyon substation, steps up to 500 kV)	HH-West Project Intermediate substation, collects and steps up to 230 kV
O&M Facilities	One O&M Facility located directly adjacent to the HH-East Project substation	One O&M Facility located directly adjacent to the HH-West Intermediate Project substation	One O&M Facility located directly adjacent to the HH-West Intermediate Project substation
Transmission	Up to 500 feet of 230-kV transmission line would be built during Phase 1.	Up to 10.2 miles of 230-kV gen-tie from the HH-West Intermediate Substation to the HH-West Step-up substation; up to 0.5 mile of 500-kV transmission from the HH West Step-up substation to BPA's Webber Canyon substation	Up to 19.4 miles of 230-kV intertie between the HH-East substation and HH-West substation.

BPA = Bonneville Power Administration; kV = kilovolt; MW = megawatt; O&M = operations and maintenance


Horse Heaven
Wind Farm
SCOUT
CLEAN ENERGY
Figure 1
Project Location
BENTON COUNTY, WA
Project Lease Boundary
TETRA TECH
Reference Map
Canada
Washington
Oregon
West Richland
Benton City
Richland
Pasco
Kennewick
Burbank
Prosser
Highland
Wallula
Paterson
Plymouth
Umatilla
Irrigon
Boardman
Hermiston
Columbia River
WASHINGTON
OREGON
1:250,000 WGS 1984 UTM Zone 11N
0 1 2 4 6 8
Miles
NOT FOR CONSTRUCTION

2 METHODOLOGY

2.1 Economic Impact Analysis

The economic impact of the Project will occur in two phases: (1) the initial construction phase (including both Phases of construction); and (2) following construction, the operations and maintenance phase. This report assesses both Phases using the IMPLAN model and software. Impacts are assessed separately for the two Project Phases, with two alternatives considered for Phase 2 (Phases 2a and 2b), resulting in six separate analyses. Impacts are assessed using a multi-county model with data specific to Benton and Franklin counties. The analysis uses IMPLAN data for 2019, the most recent year for which data are available. Construction and operation of the proposed Project will generate economic benefits in the regional economy through direct expenditures for materials and services, as well as new payroll income.

2.1.1 Economic Impact Model (IMPLAN)

IMPLAN is a regional input-output model widely used to assess the economic impacts of energy and many other types of projects. The IMPLAN model divides the economy into 546 sectors including government, households, farms, and various industries, and models the linkages between the various sectors. The linkages are modeled through input-output tables that account for all dollar flows between different sectors of the economy. Using national industry and state-level economic data derived from the U.S. Bureau of Economic Analysis, U.S. Census, and other government sources, IMPLAN models how spending in one sector of the economy is spent and re-spent in other sectors of the economy. By tracing these linkages, the model approximates the flows of initial project spending through the local economy based on the supply lines connecting the various economic sectors. These linkages vary by sector and also through regional differences in spending and employment patterns. The amount spent locally decreases with each successive transaction away from the initial expenditure due to the effects of savings, taxes, or other activities that happen outside the local economy, known as leakages.

The economic relationships modeled by IMPLAN allow the user to estimate the overall change in the economy that would result from construction and operation of a proposed project. The dollars spent on project construction and operation within the selected analysis area (Benton and Franklin counties, in this case) are analyzed to determine the total economic impact within that area. The direct investments in project construction and operation trigger successive rounds of spending that result in an overall increase in employment, labor income, and economic output in the local economy. Construction-related impacts are assessed as one-time impacts; operations and maintenance-related impacts are modeled as annual impacts.

2.1.2 Impact Types

Economic multipliers derived from the model are used to estimate total economic impacts. Total economic impacts consist of three components: direct, indirect, and induced impacts. These three components may be described as follows:

- The *direct* impact component consists of expenditures made specifically for the proposed facility, such as construction labor and materials. These direct impacts generate economic activity elsewhere in the local economy through the multiplier effect, as initial changes in demand "ripple" through the local economy and generate indirect and induced impacts. For this analysis, the direct component is based on labor expenditures only and does not include direct expenditures on materials, which are included as part of the indirect impact analysis.

- *Indirect* impacts are generated by the expenditures on goods and services by suppliers who provide goods and services to the construction project. Indirect effects are often referred to as "supply-chain" impacts because they involve interactions among businesses. In this analysis, indirect impacts also include the effects of direct expenditures on materials.
- *Induced* impacts are generated by the spending of households associated either directly or indirectly with the proposed facility. Workers employed during construction, for example, will use their income to purchase groceries and other household goods and services. Workers at businesses that supply the facility during construction or operation will do the same. Induced effects are sometimes referred to as "consumption-driven" impacts.

2.1.3 Impact Measures

Impacts are assessed using the following measures that are reported by the IMPLAN model:

- *Output* – the value of goods and services produced, which serves as a broad measure of economic activity.
- *Jobs* – measured as the average number of employees engaged in full- or part-time work. For this analysis, model outputs are subsequently adjusted to full-time equivalents (FTEs) using coefficients provided by IMPLAN.[4]
- *Personal income* (or labor income) – expressed as the sum of employee compensation and proprietary income.
    - Employee compensation (wages) includes workers' wages and salaries, as well as other benefits such as health, disability, and life insurance; retirement payments; and non-cash compensation; expressed as total cost to the employer.
    - Proprietary income (business income) represents the payments received by small-business owners or self-employed workers.

2.2 Fiscal Impacts

2.2.1 Sales and Use Tax

The State of Washington imposes a sales and use tax of 6.5 percent. Sales tax applies to most retail sales of "tangible personal property" within Washington, including some services such as lodging and related services. Use taxes are equivalent to sales taxes and apply to taxable purchases made out-of-state for use in Washington. State sales and use tax revenues are deposited in the state general fund. In addition to the 6.5 percent state sales and use tax, local governments can impose local sales taxes on the same tax base as the state. Cities and counties can impose up to 1 percent in "unrestricted" sales taxes that may be used for any lawful government purpose, as well as a number of "restricted" local sales taxes that may only be used for specific purposes (Municipal Research and Services Center 2020, Senate Ways and Means Committee 2020).

Both Benton and Franklin counties impose an unrestricted sales tax of 1.0 percent. Benton County also imposes the following restricted taxes: Public Transit (0.6 percent), Criminal Justice (0.1 percent), Public Safety (0.3 percent), and Juvenile Correction (0.1 percent) for an overall local sales tax total of 2.1 percent. Franklin County imposes the following restricted taxes: Public Transit (0.6 percent), Criminal

[4] Jobs are reported in this study as full-time equivalents (FTEs). Each FTE job equates to one full-time job for one year or 2,080-hour units of labor. Part-time or temporary jobs constitute a fraction of a job. For example, if an engineer works just 3 months on a solar project, that would be considered one-quarter of an FTE job. FTEs are also sometimes referred to as job-years.

Justice (0.4 percent), and Juvenile Correction (0.1 percent), which, like Benton County, results in an overall local total of 2.1 percent (Washington Department of Revenue 2020a). In Fiscal Year 2019, local sales and use taxes generated approximately $106 million in revenue in Benton County and $26.2 million in revenue in Franklin County (Washington Department of Revenue 2020b).

The State of Washington provides a sales and use tax exemption to wind and solar facilities with a generating capacity over 1 kW. The exemption may be claimed in the form of a sales or use tax remittance of 50 percent, 75 percent, or 100 percent of the sales or use tax paid on qualified machinery and equipment, and installment labor and services (Revised Code of Washington [RCW] 82.08.962; RCW 82.12.962). The amount of the remittance is determined by criteria established by the Washington Department of Labor and Industries (L&I) and applied for through the Department of Revenue. The incentive requires operators to pay the sales or use tax on the machinery, equipment and installation services then claim a remittance from the Department of Revenue. The program applies to projects commenced after January 1, 2020 and completed by December 31, 2029.

The following analysis assumes that the Project would meet the criteria for a 100 percent remittance and Project-related qualified machinery, equipment, and installment labor and services would be exempt from sales and use tax. These criteria include certification by the Washington L&I that the project is developed under a community workforce agreement or project labor agreement.[5] Procurements assumed to be subject to state and local sales tax are limited to those items not used directly to generate electricity in accordance with RCW 82.08.962. These include local expenditures on concrete, rebar, and other construction materials, as well as expenditures related to O&M building construction. Sales and use tax revenues from construction would be one-time revenues generated during the construction phase only.

Local expenditures by construction workers would also generate local sales tax revenues for Benton and Franklin counties, as would indirect and induced economic activity that would be supported elsewhere in the local economy. These impacts are not estimated but would provide additional benefit to Benton and Franklin counties that would be in addition to the direct procurement-related impacts estimated below.

2.2.2 Property Tax

Property taxes are a primary source of revenue for counties. The property tax system in Washington State is a "budget-based" system, which means that counties and other taxing districts first establish the total dollar amount of property tax revenue they wish to generate in the upcoming year. Once this amount is established, the county assessor then calculates the applicable levy rate based on the total assessed value of all properties in the county. A total of $255 million in property tax revenues were generated in Benton County in 2020 (Benton County 2020).

The levy or millage rate, which determines the amount an individual property owner owes, is expressed as a dollar amount per $1,000 assessed value. A jurisdiction with a levy rate of 10 mills would impose tax at the rate of $10 per $1,000 of property value. The Washington State Constitution requires that levy rates are uniform (i.e., the same) for all properties within a taxing district. The one exception to this requirement is for agricultural, timber, and open space land, as discussed below. The county assessor's office is responsible for assessing all property located within the county, including both incorporated and unincorporated areas. The resulting assessed value is the true and fair value of the property, which is

[5] Scout, operating as Horse Heaven Wind Farm, LLC, intends to engage relevant organized labor when the Project is closer to construction. Any formal arrangement cannot be made until a Balance of Plant contractor has been selected to build the project. Various Balance of Plant contractors have pre-existing relationships with organized labor, so there is not a one-size-fits-all approach that could be committed to today. However, given the tax benefit, Scout is anticipating utilizing organized labor and as a result the economic study reflects this. Scout reserves the right to not utilize organized labor.

defined as the fair market value and is the amount a buyer would pay to a willing seller. The assessor may determine true and fair value through use of a sales (market data), cost, or income approach or a combination thereof.

The total dollar amount of property taxes to be collected in one year is known as the levy amount. In Washington, the amount the levy amount can grow from year-to-year is limited by the "levy lid," also known as the "1% increase limit" or "101% limit." For counties with more than 10,000 residents, like Benton County, annual increases in the levy amount cannot exceed 1 percent or the rate of inflation, whichever is lower, plus an additional amount generated by new construction and "add-ons." These "add-ons" include increases in assessed valuation from the previous year due to new construction and property improvements and construction of renewable energy electricity-generating facilities, including Turbine and solar facilities (RCW 84.55.010).

Individual government units with property tax authority in Benton County, include the state, county, cities, school districts, hospitals, libraries, and fire districts. These government units, known as taxing districts, combine to form Tax Areas, which represent unique combinations of overlapping taxing districts. The resulting combined levy or millage rate varies by Tax Area.

The Benton County Levy Rates report for 2020 identified 52 Tax Areas, with corresponding levy rates ranging from 7.89 to 13.32 mills. The majority of the Tax Areas (90 percent) had 2020 levy rates above 10 mills, which is reflected in the average rate per Tax Area, which was 11.29 mills. This rate is very similar to the actual county average rate, which was 11.40 mills in 2020, based on the ratio of annual taxes levied to total assessed value (Benton County 2020).

The parcels that make up the Project Lease Boundary fall within a number of different Tax Areas. The most common rate identified in a limited review of parcels was 11.49 mills, which is very similar to the Tax Area and county averages. The following analysis uses the county average rate of 11.40 mills and estimates potential property tax revenues based on the estimated installed cost of the Project phases. Estimated Project-related property tax revenues are assumed to be "add-ons" to existing levy amounts and would represent increases to current levels.

Property tax revenues are estimated for each phase for the first year of operation. Total property tax revenues are also estimated for the assumed 35-year operating life of the Project. The assessed value of the Project phases over this period are estimated based on the installed cost, average mill rate, and the *2021 Personal and Industrial Property Valuation Guidelines* published by the Washington Department of Revenue (2020c). The Washington Department of Revenue valuation guidelines use a trended investment method based on typical physical depreciation and functional obsolescence for assets that have been maintained in average condition. The value of the asset is estimated by multiplying the original cost by an annual "percent good factor" that decreases over time. The trended investment valuation indicators provided by the Washington Department of Revenue vary by business activity or type of business. The valuation indicators identified for solar and wind electrical generating facilities were used in the following analysis.

Farm and Agricultural Land

As noted above, the Washington State Constitution requires that all taxes on real estate be uniform within a taxing district, with the exception of lands classified as farm and agricultural land, open space land, or timber land. The Open Space Taxation Act, enacted in 1970, authorizes these lands to be valued on the basis of their current use rather than fair market value. Landowners may apply for special reduced valuations for property that qualifies for one of the three classifications under the Act. The classification for farm and agricultural land applies to land primarily devoted to the production of livestock, agricultural

commodities for commercial purposes, and other commercial agricultural activities. The classification also allows other incidental uses that are compatible with agricultural use, provided that incidental uses do not exceed 20 percent of the classified land (RCW 84.34.020).

For wind facilities, each Turbine occupies a relatively small footprint. Landowners can usually continue farming and livestock operations and land developed for wind facilities could continue to qualify as farm and agricultural land for property tax purposes. For areas developed for solar facilities, agricultural use would no longer be possible and in cases where solar facilities occupy 20 percent or more of the affected property, the affected land would no longer qualify for classified status as farm and agricultural land.

Following removal from classified status, the affected property would be valued at fair market value for property tax purposes. In addition, removed properties that have been in the program for less than 10 years are subject to an additional tax, plus interest and a penalty. The additional tax is equal to the difference between the tax paid on the current use value and the tax that would have been paid if the land had not been classified (i.e., the tax that would have been paid based on fair market value).[6] The additional tax is payable for the last seven tax years, plus interest at the same rate as charged on delinquent property taxes, plus a penalty of 20 percent of the total amount (Washington Department of Revenue 2017).

The additional tax is distributed by the county treasurer in the same manner as current taxes imposed on the subject land. The interest and penalties are distributed to the county's current expense fund. The solar components of the Project, up to 300 MW for Phase 1 and up to 250 MW for Phase 2a, would likely result in the removal of affected properties that currently participate from classified status. The corresponding additional tax, interest, and penalties would result in additional property tax revenues to the county above those discussed in the preceding section. These potential increases are discussed in qualitative terms in the following analysis.

2.3 Impact Sources

2.3.1 Construction

The Project would have a nameplate generating capacity of up to 1,150 MW and consist of a combination of wind and solar facilities, along with one or more BESS. The exact combination of facilities will depend on the final wind Turbine models and solar modules selected, with Scout presently seeking to permit a range of technologies to preserve design flexibility. For the purposes of analysis, Scout has developed a representative development scenario that assumes that the Project would be built in two Phases, with each Phase representing a distinct and fully functional subset of the larger Project. Two alternatives (Alternatives A and B) are identified for Phase 2 to identify a range of possible impacts that could occur as a result of the Project.

Power generated by the Project would be transmitted to existing Bonneville Power Administration (BPA) transmission lines via two interconnections. Up to 650 MW of power could interconnect to the planned BPA 230-kilovolt (kV) Bofer Canyon substation. Up to 500 MW of power could interconnect to the planned BPA 500-kV Webber Canyon substation. Other Project components would include up to two BESS, underground and limited overhead electrical collection lines, underground communication lines, new Project substations, access roads, O&M facilities, meteorological towers, control houses, and

[6] Each Washington county assessor is required to maintain two values for each classified parcel: (1) the value that would be placed on the land if it was not classified (i.e., the fair market value); and (2) the value based on its current use.

temporary construction yards. Project components are summarized for each phase in Table 1 (see Section 1.0).

2.3.1.1 Construction Schedule

The construction of the Project would be performed in several stages and would include the following main elements and activities:

- Grading the field construction office area (also used for O&M facilities);
- Constructing site roads, turn-around areas, and crane pads;
- Constructing the Turbine tower foundations and transformer pads;
- Constructing the foundations and installing the posts and tracking system for the solar array;
- Installing the electrical collection system – underground and some overhead lines;
- Assembling and erecting the Turbines;
- Assembling the solar arrays;
- Assembling the BESS;
- Erecting the security fence around the solar arrays, substations, and O&M facilities;
- Constructing and installing the substation; and
- Plant commissioning and energization.

These elements and activities would all apply to Phase 1 and Phase 2a. Phase 2b consists of 500 MW generated via wind and would not include the identified solar and BESS related activities. Scout anticipates beginning construction of the first phase of the Project in January 2023 and commercial operation by the end of 2023. A second phase, either Phase 2a or Phase 2b, would begin construction in January 2024 and begin operation by the end of 2024.

2.3.1.2 Construction Employment and Expenditures

Based on similar project experience, Scout estimates that Project construction of Phase 1 will directly employ an average of approximately 300 workers on-site over the 11-month construction period. On-site construction employment for Phase 1 would follow a bell-shaped curve, peaking near the middle of the construction period with up to 467 workers employed on-site at the same time. On-site workers will include technicians, laborers, foremen, equipment operators, and construction managers, with approximately 62 percent of these positions expected to be filled by workers normally resident in Benton and Franklin counties.

Construction of Phases 2a and 2b is estimated to employ respective averages of approximately 267 and 271 workers over a 10- to 11-month construction period, with an estimated 62 percent and 60 percent of these positions expected to be filled by local workers, respectively. On-site construction employment for both Phase 2 alternatives would also follow a bell-shaped curve, with employment peaking near the middle of the construction period with approximately 412 (Phase 2b) to 430 (Phase 2a) expected to be employed on-site at the same time.

The above employment estimates include the direct labor that would be required to complete the tasks summarized above, as well as the proposed transmission line construction (Table 1). These estimates represent the average and peak numbers of people expected to be employed on-site at one time and are not expressed in FTEs. These estimates assume that the Project would be built under a community workforce or project labor agreement that would include the use of apprentices for 15 percent of the labor

hours. Initial workforce estimates developed by Scout were, therefore, increased by 15 percent to account for apprentices. Use of a community workforce or project labor agreement is discussed further with respect to sales and use tax in Section 2.2.1.

The above employment estimates do not include workers directly employed elsewhere in Benton and Franklin counties providing Project-related technical services such as engineering design and permitting. Additional workers will also be employed by BPA to implement the network upgrades required to facilitate the transfer of electricity from the Project to the BPA grid.

Construction costs for this analysis were provided by Scout. For wind generation facilities, the largest share of the overall construction cost consists of the purchase and transportation of the equipment (Turbines, blades, and towers) to the Project site. Project-related materials and equipment (solar modules, inverters, BESS, electrical components, and mounting) also account for the largest share of the overall construction cost for solar facilities, with these two categories together accounting for more than half of the total estimated cost. None of these expenditures are expected to occur in Benton and Franklin counties.

Other expenditures expected to occur in Benton and Franklin counties include balance of plant (wind) and balance of system (solar expenditures), including local expenditures on concrete, rebar, and other construction materials, electrical components, and cabling required to prepare the sites. Other expenditures expected to occur in Benton and Franklin counties include those related to engineering, legal services, substation and transmission line construction, and O&M building construction, as well as local expenditures related to the BPA network upgrades required to accommodate the energy that would be generated by the Project. The shares of these expenditures expected to occur in Benton and Franklin counties were estimated by Scout.

Installation labor-related expenditures that occur in Benton and Franklin counties will result in secondary economic impacts elsewhere in the local economy. Installation labor expenditures in this context refer to wage and salary payments to construction workers employed directly on-site. Payments to construction workers who normally reside in the Benton and Franklin counties are assessed as household income, a share of which will be spent locally and are captured in the IMPLAN model as induced impacts. Workers temporarily relocating to the Project area for the duration of their on-site employment will also spend money locally. Local expenditures by these workers were estimated using per diem information provided by Scout and assigned to the appropriate economic sectors in IMPLAN, primarily those related to lodging/housing, food, transportation, and incidentals.

2.3.2 Operation

Once the construction phase is complete, operation and maintenance of the Project will continue to contribute to the local economy. The Project will provide direct operation-related employment and Project-related operation expenditures will generate economic benefits in the local economy. A team of 16 to 20 personnel would be employed at the Project to operate and maintain Project components, including a facility manager, a project site manager, a project site lead, and a certified crew of technicians. The Project would also have specified personnel on-call 24-hours per day, 7 days per week, should an issue arise outside of normal business hours. The Project would require preventive and corrective maintenance of the Turbines, solar array, BESS, electrical collection system and Project substation, as well as direct operations dispatch to ensure continuing plant and transmission system safety and reliability. Typical local operation-related expenditures include vehicle-related expenditures, such as fuel costs, site maintenance, replacement parts and equipment, and miscellaneous supplies. For the

purposes of analysis, operations and maintenance employees were divided between the two Phases, based on the relative generating capacity of each Phase.

Lease payments to landowners will also generate annual benefits to the local economy over the expected 35-year operating life of the Project. These payments represent a net increase in income for the landowner. For wind facilities, each Turbine occupies a relatively small footprint when compared to the site as a whole and landowners can usually continue farming and livestock operations on their property.

3 RESULTS

3.1 Construction Impacts from Phase 1 of the Horse Heaven Wind Farm

3.1.1 Employment, Labor Income, and Economic Output

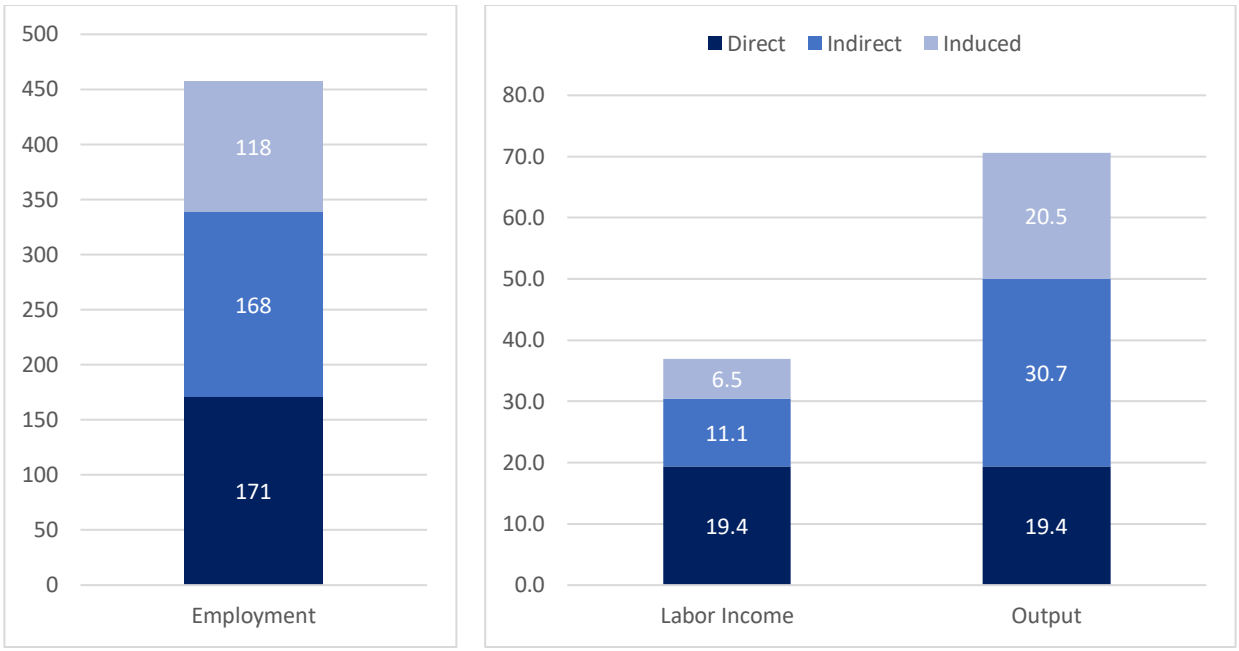
Estimated Phase 1 construction impacts are summarized for Benton and Franklin Counties in Table 2. These estimates are one-time impacts for the 11-month construction period developed using the IMPLAN modeling software and 2019 IMPLAN data for Benton and Franklin counties. Job estimates are presented in FTEs or job-years, with each identified job representing 12 months (2,080 hours) of employment. Construction of the Project is estimated to involve approximately 171 on-site FTE jobs that would be filled by local workers (i.e., workers normally resident in Benton and Franklin counties). On-site jobs expected to be filled by local workers include those associated with site work, foundations, electrical work, and other related labor needed to construct the Project. Additional on-site positions that would be filled by workers from outside the region are not included in these estimates. The impact of estimated per diem spending by non-local workers is, however, captured in the indirect and induced impact estimates.

Construction of Phase 1 would also support employment, labor income, and economic output in other sectors of the local economy, with indirect impacts estimated to support approximately 168 jobs and induced impacts estimated to support a further 118 jobs (Table 2). Overall, construction of Phase 1 is estimated to support a total of approximately 458 jobs in Benton and Franklin counties and approximately $37.0 million in labor income, with total economic output of approximately $70.6 million (Figure 2).

Table 2. Estimated One-Time Phase 1 Construction Impacts

Type of Impact[1]	Employment (FTE)[2]	Labor Income ($ million)[3]	Economic Output ($ million)[3]
Direct Impacts	171	19.4	19.4
Indirect Impacts	168	11.1	30.7
Induced Impacts	118	6.5	20.5
Total Impacts	**458**	**37.0**	**70.6**

Notes:
FTE = full-time equivalent
[1] Estimates are for the entire 11-month construction period. Numbers may not sum due to rounding.
[2] Jobs are FTE for a period of one year (1 FTE = 2,080 hours). Direct jobs include those directly employed on-site during construction. Additional on-site positions that would be filled by workers from outside Benton and Franklin counties are not included in these estimates.
[3] Labor income and economic output are expressed in millions of dollars in Year 2021 dollars.



Notes:
[1] Employment is expressed in FTE jobs (1 FTE = 2,080 hours).
[2] Labor income and economic output are expressed in millions of dollars in Year 2021 dollars.

Figure 2. Estimated One-Time Phase 1 Construction Impacts

3.1.2 Tax Revenues

In addition to the 6.5 percent statewide sales and use tax levied by the State of Washington, Benton and Franklin counties each levy an additional 2.1 percent in local sales and use tax. Scout anticipates that both Phases of the Project will qualify for the sales and use tax exemption that Washington state provides for wind and solar facilities. Local procurements assumed to be subject to state and local sales tax are limited to those items not used directly to generate electricity in accordance with RCW 82.08.962. Overall, Phase 1 construction would generate one-time revenues of approximately $2.9 million in state and $1.0 million in local (Benton and Franklin counties) sales tax.

3.2 Annual Operation Impacts from Phase 1 of the Horse Heaven Wind Farm

3.2.1 Employment, Labor Income and Economic Output

Estimated Phase 1 operation impacts are summarized for Benton and Franklin counties in Table 3. These estimates are annual average impacts based on estimated operations and maintenance expenditures for a 35-year period of operation. Eleven full-time employees would be employed on-site to operate and maintain the Phase 1 share of the Project, with all of these workers expected to reside in Benton and Franklin counties. Operation and maintenance of the Project would also support employment, labor income, and economic output in other sectors of the local economy. Indirect impacts are estimated to support approximately 12 jobs, with induced impacts estimated to support approximately 9 jobs (Table 3). Estimated indirect and induced impact estimates include the impacts of Project-related lease payments to participating landowners, including the Washington Department of Natural Resources (DNR).

Overall, operation of Phase 1 is estimated to support approximately 32 total (direct, indirect, and induced) jobs in Benton and Franklin counties and approximately $2.4 million in labor income, with total

economic output of approximately $5.5 million. These estimated annual impacts are expected to occur each year that the Project operates.

Table 3. Estimated Annual Operation Phase 1 Impacts

Type of Impact[1]	Employment (FTE)[2]	Labor Income ($ million)[3]	Economic Output ($ million)[3]
Direct Impacts	11	1.0	1.0
Indirect Impacts	12	0.9	3.0
Induced Impacts	9	0.5	1.5
Total Impacts	**32**	**2.4**	**5.5**

Notes:
FTE = Full-time equivalent
[1] Estimates are annual impacts that would occur each year the Project is in operation. Estimates are for the first year of operation. Numbers may not sum due to rounding.
[2] Jobs are FTE for a period of one year (1 FTE = 2,080 hours).
[3] Labor income and economic output are expressed in millions of dollars in Year 2021 dollars.

3.2.2 Tax Revenues

The Project would be subject to property taxes at the county level. Property taxes would generate revenues on an annual basis for the life of the Project. Based on the estimated installed cost of the Phase 1 facility and the average mill rate for Benton County in 2020 (11.4 mills), Phase 1 would generate an estimated $10.4 million in property taxes in its first year of operation.[7] This estimated total is equivalent to approximately 4.1 percent of the total property tax revenues generated in Benton County in 2020.

Over the 35-year operating life of the Project, Phase 1 would generate an estimated $140.6 million in total property tax revenues based on the installed cost, average mill rate, and the applicable trended investment valuation indicators provided by the Washington Department of Revenue (2020c).

Figure 3 shows the share of estimated revenues by type of taxing district based on a representative tax parcel in the Project Lease Boundary area that was identified through a spot review of affected parcels. Based on this representative distribution, more than half of the property tax revenues generated by Phase 1 would be paid to schools, with 32 percent of the total directly paid to local school districts. Fire districts account for the next largest share of revenues (14 percent), followed by roads (12 percent) (Figure 3). Viewed in dollar terms, Phase 1 during its first year of operation would generate approximately $6.1 million in school-related tax revenues, with $3.4 million of this total paid directly to local school districts.

[7] The levy or millage rate, which determines the amount an individual property owner owes, is expressed as a dollar amount per $1,000 assessed value. A jurisdiction with a levy rate of 10 mills, for example, would impose tax at the rate of $10 per $1,000 of property value (see Section 2.2.2).

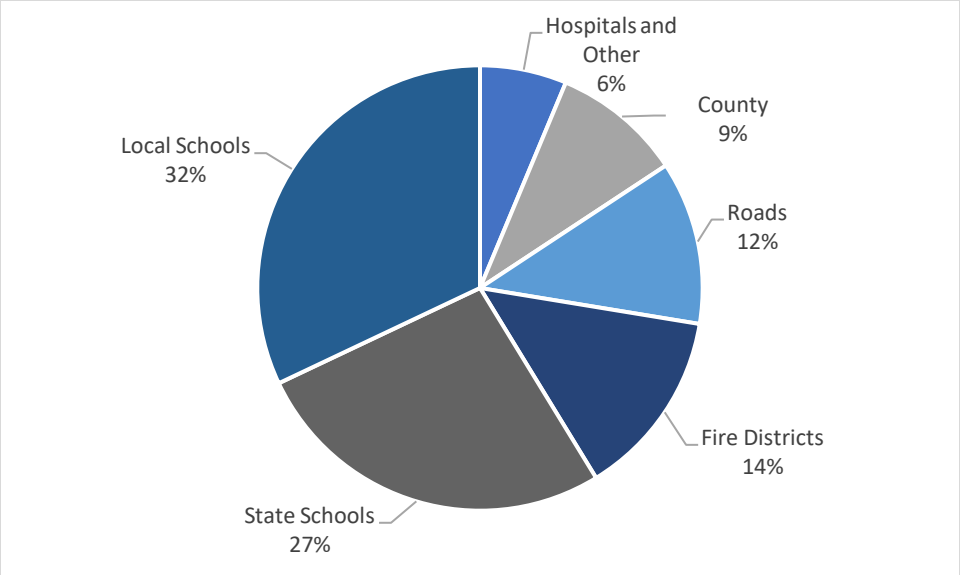


Figure 3. Representative Distribution of Property Tax Revenues

Construction of the solar component of the Project (up to 300 MW) could also result in land currently classified as farm and agricultural land for property tax purposes being removed from that classification. Properties that are removed and have been in the program for less than 10 years are subject to an additional tax, plus interest and a penalty. Additional tax, interest, and penalty revenues generated as a result of the Project would represent additional property tax revenues paid to Benton County over current levels in the first year of operation and in addition to the $10.4 million estimated above.

3.3 Construction Impacts from Phase 2 of the Horse Heaven Wind Farm

3.3.1 Employment, Labor Income and Economic Output

Estimated Phase 2a and Phase 2b construction impacts are summarized in Tables 4 and 5, respectively. Construction of Phase 2a of the Project is estimated to involve approximately 152 on-site FTE jobs that would be filled by local workers (i.e., workers normally resident in Benton and Franklin counties). For Phase 2b, an estimated 136 on-site FTE construction jobs would be filled by local workers. On-site jobs expected to be filled by local workers include those associated with site work, foundations, electrical work, and other related labor needed to construct the Project. Additional on-site positions that would be filled by workers from outside the region are not included in these estimates. The impact of estimated per diem spending by non-local workers is, however, captured in the indirect and induced impact estimates.

Construction of Phase 2 would also support employment, labor income, and economic output in other sectors of the local economy, with Phase 2a and Phase 2b estimated to support 199 and 269 indirect jobs, respectively (Tables 4 and 5). The higher number of indirect jobs for Phase 2b is mainly due to local expenditures on construction materials and transmission line-related expenditures, both of which are estimated to be higher for Phase 2b than for Phase 2a. Induced impacts are estimated to support a further 120 and 135 jobs for Phases 2a and 2b, respectively (Tables 4 and 5).

Overall, construction of Phase 2 is estimated to support a total of 472 to 539 jobs in Benton and Franklin counties and approximately $37.6 million to $41.9 million in labor income, with total economic output of approximately $73.0 million to $85.7 million (Tables 4 and 5, Figure 4).

Table 4. Estimated One-Time Phase 2a Construction Impacts

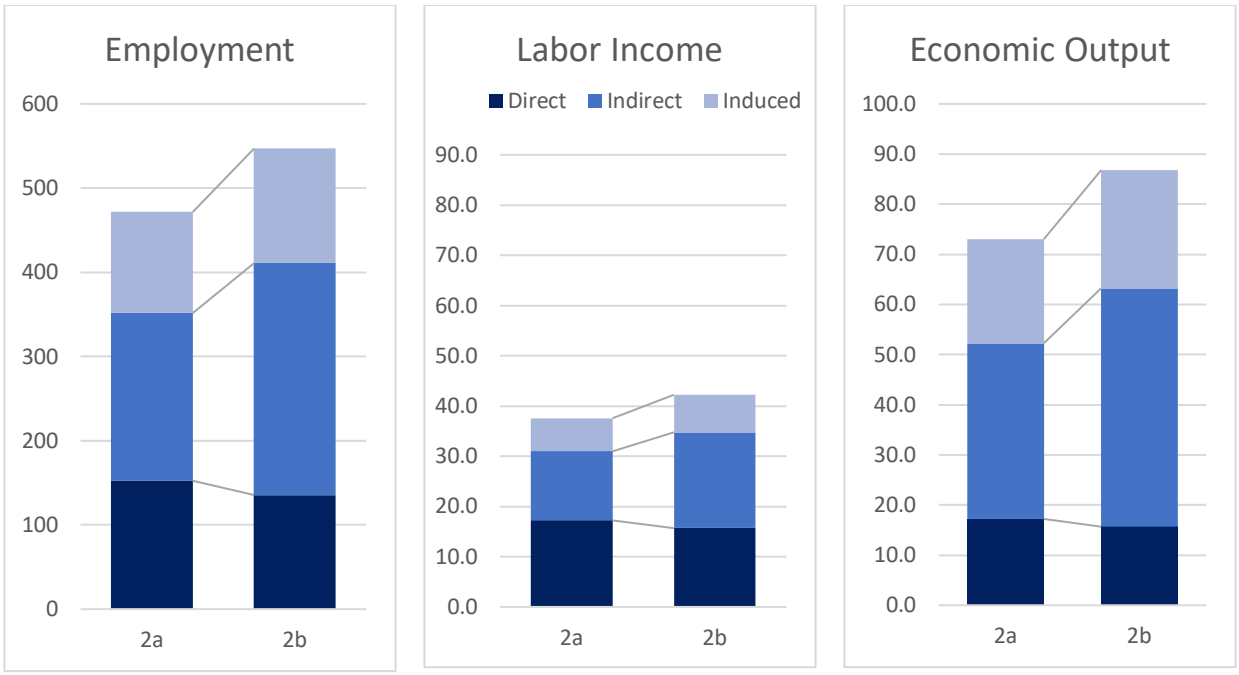
Type of Impact[1]	Employment (FTE)[2]	Labor Income ($ million)[3]	Economic Output ($ million)[3]
Direct Impacts	152	17.2	17.2
Indirect Impacts	199	13.8	35.0
Induced Impacts	120	6.6	20.8
Total Impacts	**472**	**37.6**	**73.0**

Notes:
FTE = full-time equivalent
[1] Estimates are for the entire 11-month construction period. Numbers may not sum due to rounding.
[2] Jobs are FTE for a period of one year (1 FTE = 2,080 hours). Direct jobs include those directly employed on-site during construction. Additional on-site positions that would be filled by workers from outside Benton and Franklin counties are not included in these estimates.
[3] Labor income and economic output are expressed in millions of dollars in Year 2021 dollars.

Table 5. Estimated One-Time Phase 2b Construction Impacts

Type of Impact1	Employment (FTE)[2]	Labor Income ($ million)[3]	Economic Output ($ million)[3]
Direct Impacts	136	15.7	15.7
Indirect Impacts	269	18.8	46.7
Induced Impacts	135	7.4	23.4
Total Impacts	**539**	**41.9**	**85.7**

Notes:
FTE = full-time equivalent
[1] Estimates are for the entire 10-month construction period. Numbers may not sum due to rounding.
[2] Jobs are FTE for a period of one year (1 FTE = 2,080 hours). Direct jobs include those directly employed on-site during construction. Additional on-site positions that would be filled by workers from outside Benton and Franklin counties are not included in these estimates.
[3] Labor income and economic output are expressed in millions of dollars in Year 2021 dollars.



Notes:
[1] Employment is expressed in FTE jobs (1 FTE = 2,080 hours).
[2] Labor income and economic output are expressed in millions of dollars in Year 2021 dollars.

Figure 4. Estimated One-Time Phase 2 Construction Impacts

3.3.2 Tax Revenues

As noted with respect to Phase 1, Scout anticipates that Phase 2 will qualify for the sales and use tax exemption that Washington state provides for wind and solar facilities. Estimated local procurements not directly related to electric generation are estimated to generate one-time revenues of $2.2 million to $3.7 million in state sales tax, and $0.7 million to $1.2 million in local (Benton and Franklin counties) sales tax. Phase 2a represents the lower of the range of both estimates.

3.4 Annual Operation Impacts from Phase 2 of the Horse Heaven Wind Farm

3.4.1 Employment, Labor Income and Economic Output

Estimated Phase 2 operation impacts are summarized in Tables 6 and 7. These estimates are annual average impacts based on estimated operations and maintenance expenditures for a 35-year period of operation. Scout has estimated that 9 full-time employees would be employed on-site to operate and maintain the facility, with all of these workers expected to reside in Benton and Franklin counties. Operation and maintenance of the Project would also support employment, labor income, and economic output in other sectors of the local economy. Indirect impacts are estimated to support approximately 9 to 10 jobs, with induced impacts estimated to support approximately 7 jobs (Tables 6 and 7). Estimated indirect and induced impact estimates include the impacts of Project-related lease payments to participating landowners, including Washington DNR.

Overall, operation of Phase 2 is estimated to support approximately 24 to 26 total (direct, indirect, and induced) jobs in Benton and Franklin counties and approximately $1.8 million to $2.1 million in labor

income, with total economic output of approximately $4.1 million to $5.2 million. These estimated annual impacts are expected to occur each year that the Project operates.

Table 6. Estimated Annual Operation Phase 2a Impacts

Type of Impact[1]	Employment (FTE)[2]	Labor Income ($ million)[3]	Economic Output ($ million)[3]
Direct Impacts	9	0.8	0.8
Indirect Impacts	9	0.7	2.2
Induced Impacts	7	0.4	1.1
Total Impacts	**24**	**1.8**	**4.1**

Notes:
FTE = Full-time equivalent
[1] Estimates are annual impacts that would occur each year the Project is in operation. Estimates are for the first year of operation. Numbers may not sum due to rounding.
[2] Jobs are FTE for a period of one year (1 FTE = 2,080 hours).
[3] Labor income and economic output are expressed in millions of dollars in Year 2021 dollars.

Table 7. Estimated Annual Operation Phase 2b Impacts

Type of Impact[1]	Employment (FTE)[2]	Labor Income ($ million)[3]	Economic Output ($ million)[3]
Direct Impacts	9	0.8	0.8
Indirect Impacts	10	0.9	3.2
Induced Impacts	7	0.4	1.3
Total Impacts	**26**	**2.1**	**5.2**

Notes:
FTE = Full-time equivalent
[1] Estimates are annual impacts that would occur each year the Project is in operation. Estimates are for the first year of operation. Numbers may not sum due to rounding.
[2] Jobs are FTE for a period of one year (1 FTE = 2,080 hours).
[3] Labor income and economic output are expressed in millions of dollars in Year 2021 dollars.

3.4.2 Tax Revenues

Based on the estimated installed costs and the average mill rate for Benton County in 2020 (11.4 mills), Phase 2 would generate an estimated $9.0 million in property taxes in its first year of operation. This estimated total, which is the same for both Phase 2 alternatives (Phase 2a and 2b), is equivalent to approximately 3.5 percent of the total property tax revenues generated in Benton County in 2020.

Over the 35-year operating life of the Project, Phase 2a would generate an estimated $122.3 million in total property tax revenues. The estimated total generated under Phase 2b over the same 35-year period would be $121.7 million. These estimates are based on the estimated installed cost, the average mill rate for Benton County (11.4 mills), and the applicable trended investment valuation indicators provided by the Washington Department of Revenue (2020c).

As discussed with respect to Phase 1, more than half of the property tax revenues generated by Phase 2 would be paid to schools, with 32 percent of the total directly paid to local school districts. This estimate is based on a representative tax parcel in the Project Lease Boundary area (see Figure 3). Viewed in dollars terms, Phase 2 would generate approximately $5.3 million in school-related tax revenues, with $2.9 million of this total paid directly to local school districts.

Under Phase 2a, construction of the solar component of the Project (up to 250 MW) could also result in land currently classified as farm and agricultural land for property tax purposes being removed from that classification. Properties that are removed and have been in the program for less than 10 years are subject

to an additional tax, plus interest and a penalty. Additional tax, interest, and penalty revenues generated as a result of the Project would represent additional property tax revenues paid to Benton County over current levels in the first year of operation and in addition to the $9.0 million estimated above. This potential source of revenue would only occur under Phase 2a because Phase 2b does not include solar facilities.[8]

4 SUMMARY AND CONCLUSIONS

4.1 One-time Impacts Related to Project Construction

- Economic impacts related to Project construction are considered one-time impacts because they are limited to the construction period. Project construction would support temporary employment, income, and economic output in Benton and Franklin counties.
- Project construction would create direct jobs in Benton and Franklin counties. Construction of Phase 1 is expected to result in on-site employment of approximately 171 jobs that would be filled by workers normally resident in Benton and Franklin counties. Depending on the alternative (Phase 2a or 2b), Phase 2 construction would result in an estimated 136 to 152 on-site construction jobs that would be filled by local workers.
- On-site construction jobs would be well-paid positions. Scout proposes to construct the Project under a community workforce or project labor agreement, with on-site salaries expected to range from $65,000 to $110,000 in 2020 dollars. Construction of Phase 1 would generate an estimated $19.4 million in labor income that would be paid to local workers. Phase 2 would result in an estimated $15.7 million to $17.2 million in labor income that would be paid to local workers.
- Construction of the Project would also support employment, income, and output elsewhere in the regional economy. During Phase 1, Project construction is expected to support an estimated 168 indirect jobs and 118 induced jobs in Benton and Franklin counties. Phase 2 construction is estimated to support 199 to 269 indirect jobs and 120 to 135 induced jobs.
- Overall, construction of Phase 1 of the Project is estimated to support 458 total (direct, indirect, and induced) jobs in Benton and Franklin counties and approximately $37.0 million in labor income, with total economic output of approximately $70.6 million. During Phase 2, Project construction is estimated to support approximately 472 to 539 total jobs and approximately $37.6 million to $41.9 million in labor income, with total economic output of approximately $73.0 million to $85.7 million.
- Project construction would generate state and local sales tax revenue. Scout anticipates that the Project will meet the criteria to qualify for a sales and use tax exemption that would apply to qualified machinery, equipment, and installation services. Other Project-related local procurements would be subject to state and local sales tax. During construction, Phase 1 would generate an estimated $2.9 million in state sales tax and $1.0 million in local sales tax, with local sales tax revenues accruing to Benton and Franklin counties. During Phase 2, Project construction would generate an estimated $2.2 million to $3.7 million in state sales tax and $0.7 million to $1.2 million in local sales tax.

[8] An all-solar alternative is not considered in detail here, but this potential additional source of one-time property tax-related revenues would likely be larger under an all-solar alternative than under the two Phase 2 alternatives considered here.

4.2 Annual Impacts Related to Project Operation

Once construction is complete, operation and maintenance of the Project would continue to contribute to the regional economy over the expected 35-year operating life of the Project.

- Project operation would create direct jobs in Benton and Franklin counties. Eleven full-time employees would be employed on-site to operate and maintain the Phase 1 share of the Project. Phase 2 would employ an additional 9 full-time employees. These employees are all expected to reside in Benton and Franklin counties.
- Project operation would provide annual economic benefits in Benton and Franklin counties. Operation of Phase 1 of the Project is estimated to support approximately 32 total (direct, indirect, and induced) jobs in Benton and Franklin counties and approximately $2.4 million in labor income, with total economic output of approximately $5.5 million. Operation of Phase 2 is estimated to support 24 to 26 total jobs, an estimated $1.8 million to $2.1 million in labor income, and total economic output of $4.1 million to $5.2 million. These annual impacts are expected to occur each year the Project operates.
- Project operation would increase property tax revenues collected in Benton County. During its first full year of operation Phase 1 would generate an estimated $10.4 million in annual property taxes, an increase of 4.1 percent over current property tax revenues. Operation of Phase 2 would generate an additional $9.0 million in property tax revenues, a further increase 3.5 percent over current property tax revenues. Together, both Phases would generate almost $20 million in property tax revenues during the first year of operation, an increase of 7.6 percent over current levels.
- Over the 35-year operating life of the Project, Phase 1 would generate an estimated total of $140.6 million in property tax revenues. Operation of Phase 2 would generate an additional $121.7 million to $122.3 million in total property tax revenues over the same period.

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