Project Description

Blackberry Grove Energy Storage Project

APRIL 2025

For submittal to:

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On behalf of:

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Table of Contents

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1 Summary

Blackberry Grove LLC (Blackberry Grove) is proposing to construct and operate the Blackberry Grove Energy Storage Project (Project), a utility scale battery energy storage system (BESS) within Washington County, Oregon (County). The Project would connect to the existing 115-kilovolt (kV) Portland General Electric (PGE) West Union substation located directly adjacent to the Project site to the south via an overhead generation transmission line (gen-tie line). The Project would provide additional capacity to the electrical grid to assist with serving load during periods of peak demand by charging when demand is low and discharging when demand is high. This accommodates future integration of intermittent renewable energy sources, such as wind and solar, and reduces the need to operate natural gas power plants to meet peak demand. This will assist the State of Oregon in meeting its greenhouse gas emissions reduction goals of 80% by 2030, 90% by 2035, and 100% by 2040, as required by Oregon's Clean Energy Bill (House Bill 2021), signed into law on July 19, 2021. The Project would also serve as an additional local capacity resource that would enhance grid reliability.

This Project Description has been prepared to provide an overview of the facilities that are proposed to be constructed and operated as part of the Project. The Project site plan has been provided under separate cover.

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2 Introduction

2.1 Project Location

The Project site consists of a 9.52-acre property (Assessor's Parcel Numbers 1N214A004300 and 1N214A004400) located approximately 1.11 miles northwest of the intersection of Highway 26 at Northeast Cornelius Pass Road within unincorporated Washington County (see Figure 1, Project Site). The Project borders Northwest West Union Road to the south, Northwest Old Pass Road to the east, and Northwest Bendemeer Road to the west.

2.2 Project Objectives

Oregon's electric grid is a complex system providing reliable power to Oregon residents. Per the goals established in House Bill 2021, the state relies increasingly on renewable sources of energy, such as solar, wind, geothermal, hydroelectricity, and biomass. Grid energy storage technologies provide for multiple applications, such as energy management, backup power, load leveling, frequency regulation, voltage support, and grid stabilization. Importantly, not every type of storage is suitable for every type of application, motivating the need for a portfolio strategy for energy storage technology. As noted by the U.S. Department of Energy, "energy storage can reduce the need for major new transmission grid construction upgrades as well as augment the performance of existing transmission and distribution assets." Furthermore, "energy storage will also play a significant role in emergency preparedness and increasing overall grid resilience" (USDOE 2013).

Battery energy storage systems charge when there is an abundance of power available, and discharge it back to the grid when the need arises. The technology is advancing rapidly as a grid resource and will support system load balancing by PGE when sun and wind resources are intermittently available. Power from these renewable generation sources often is produced at different times of day, which may not align with peak use.

Due to House Bill 2021 and increasing energy demands in the region, PGE is actively soliciting battery energy storage systems like Blackberry Grove to serve as load balancing systems on their electric grid. In PGE's 2023 Integrated Resource Plan (IRP), PGE publicly acknowledged their system needs for the future and requested approximately 200-300 MW of energy storage each year through 2030. To meet these needs, PGE released Request for Proposals (RFPs) in 2021 & 2023. In their 2021 RFP, they procured approximately 400 MW of energy storage, and they are set to procure an additional 400MW in their 2023 RFP. A 2025 PGE RFP is expected by July of this year and Blackberry Grove intends to submit a proposal as it is currently in PGE's public interconnection queue. The West Union substation, where Blackberry Grove is proposed, is a critical location on PGE's grid due to its proximity to the Hillsboro area which is seeing unprecedented load growth. A battery energy storage system at West Union would help to improve the overall reliability and resiliency of the Hillsboro area and regional power grid.

Construction of the Project would accomplish the following:

- Assist Oregon in meeting its greenhouse gas emissions reduction goals of 80% by 2030, 90% by 2035, and 100% by 2040, as required by House Bill 2021.

- Enhance grid reliability in the County by providing a new and incremental capacity resource that can be utilized by PGE to minimize reliance on the transmission system during periods of peak demand or transmission contingencies
- Accommodate increasing amounts of intermittent renewable energy generation that often is not available during the early evening when energy demand is often highest
- Provide economic benefit to the County, the region, and the state, through construction jobs, property and sales taxes, construction and maintenance services, and increased energy efficiency and reliability
- Use a commercially proven and established energy storage technology that is efficient, has low maintenance requirements, and is recyclable

In addition to these benefits to the region and Oregon, specific benefits to the County are shown below:

- Annual property tax revenues would be payable to the County from the Project.
- Local benefits would accrue to the County from having the storage facility located within the County. While this helps the entire region, it would also benefit the County by maintaining the reliability and resiliency of the grid locally.
- The Project would provide significant economic benefits without burdening local transportation infrastructure, sewage infrastructure, or the local public services.

3 Project Setting

3.1 Land Use and Zoning

The Project site was selected because it is directly adjacent to the PGE West Union substation and associated transmission infrastructure, which will allow the project to interconnect into PGE's transmission and distribution system, without requiring lengthy connections ("drops") that would be required if the site were farther from the substation. This allows the project to serve both general storage and load balancing needs, and minimizes the land use impacts that the project might otherwise entail.

The Project site is located in the Agriculture and Forest District (AF5) (see Figure 2, Zoning). The parcels to the east, west, and north of the Project site are also zoned AF5. The PGE West Union substation is located just south of Northwest West Union Road and is located in the City of Hillsboro on a parcel that is zoned as Industrial Park (IP). Additionally, the Project site is located within the boundary of the Washington County Comprehensive Plan Volume II (WCCP) (Washington County 2022).

The northern portion of the Project site, parcel 1N214A004400 is vacant. The southern portion of the Project site, parcel 1N214A004300, contains a rural residence surrounded by several buildings including a barn (which would be removed during site prep and construction). Surrounding land uses include rural residential homes to the north, east, and vacant land to the west. The existing West Union substation and a Marine Sales and Service business is located directly to the south of the Project site.

3.2 Biological Resources

Dudek performed a desktop review and a site visit of the Project site on July 22, 2024 to assess the potential for biological and aquatic resources. Dudek reviewed several data sets including the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database (USFWS 2024a) and federally designated critical habitat from the U.S. Fish and Wildlife Service (USFWS 2024c) within a 10-mile radius of the Project site to determine the potential for special-status wildlife and plant species to occur in the vicinity of the Project site.

A USFWS IPaC database search identified the following special-status species as having a potential to occur within the study area and surrounding vicinity: northern spotted owl (*Strix occidentalis caurina*, federally threatened [FT]), marbled murrelet (*Brachyramphus marmoratus*, FT), streaked horned lark (*Eremophila alpestris strigata*, FT), northwestern pond turtle (*Actinemys marmorata*, proposed threatened [PT]), Fender's blue butterfly (*Icaricia icarioides fenderi*, federally endangered [FE]), and monarch butterfly (*Danaus plexippus*; candidate species). Two flowering plants are also listed, Willamette daisy (*Erigeron decumbens*, FE) and Kincaid's lupine (*Lupinus sulphureus* spp. k*incaidii*, FT).

The Project site has been extensively disturbed from grazing, grading and residential use. As a result, the Project site does not contain any critical habitat. The Project site may have the potential to support monarch butterflies should the appropriate nectar and host plants (milkweed species) be available during the summer months, though no milkweed species were observed at the site. The Project site contains intensively managed pasture, which is

typically poor habitat for monarch butterflies (NRCS 2017). As such, this species has a low potential to occur within the study area.

For additional information please refer to the Biological and Aquatic Resources Preliminary Assessment Results for the Blackberry Grove Energy Storage Project Memorandum prepared by Dudek on August 2, 2024 (Dudek 2024).

3.3 Wetlands

Based on a review of the United States Geological Survey (USGS) 3DHP hydrography dataset, and the USFWS National Wetlands Inventory (NWI), there are no mapped aquatic resources or wetlands on or adjacent to the Project site. In addition, a site visit conducted by Dudek on July 22, 2024 confirmed that no aquatic resources or wetlands were present on or directly adjacent to the Project site.

3.4 Noise

Noise-sensitive land uses include residential dwellings; transient lodging; hospitals and other long-term care facilities; public or private educational facilities; and libraries, churches, and places of public assembly. The nearest residence is located approximately 50 feet to the east of the Project site; however, the proposed Project layout includes 150-foot setbacks from the adjacent parcel lines (meaning the Project would be over 200 ft from any residences). Additionally, Liberty High School is located approximately 0.57 miles to the southwest of the Project site. Noise sources affecting noise levels on the Project site and in the vicinity mainly include vehicular traffic on nearby roads and from nearby industrial uses. The proposed BESS will be housed in purpose-built enclosures. The proposed facilities are not anticipated to generate significant noise, and the Project will be designed to meet the requirements of General Ordinances of Washington County (Washington County 2023b).

3.5 Visual Resources

There currently exists a 5- to 7-foot-tall earthen berm covered by mature evergreen trees along the perimeter of the Project site. The berm and trees provide a visual barrier approximately 40 feet tall around the Project site. The applicant intends to keep these existing features in place to help screen the Project facilities from nearby visual receptors. Project-related actions could result in potential impacts to aesthetic and visual resources if they substantially altered scenic resources within a scenic corridor or state scenic highway; substantially affected views from a scenic vista, hillside, or ridgeline; or altered the area in a way that substantially changed, detracted from, or degraded the visual quality of the Project area. The Project site, however, is not located near a designated state scenic highway. The Project's potential impact on the visual character or quality of the site would depend on the degree to which it would result in a visual contrast with the area's landscape elements, dominate views relative to other landscape features, or block or obscure views of the landscape. Given that the perimeter trees and berm will be maintained, however, it is unlikely that any the Project would result in any significant visual impact to the surrounding properties or adjacent roads.

3.6 Air Quality

During operation, the Project would not have any direct air emissions during normal operations. The Project would store energy but would not itself be a source of air pollutant emissions. The Project would not increase operational mobile source emissions as minimal vehicle trips would be added by the Project.

4 Project Characteristics

The Project is designed to discharge electricity to the grid via battery storage cabinets with associated on-site support facilities consisting of inverters, collector lines, fencing, all weathered access roads, supervisory control, a SCADA system, and other ancillary facilities or equipment (see Site Plan submitted under separate cover). The Project would also include a collector substation and gen-tie line that will support interconnection to the existing PGE 115 kV West Union substation.

The Project is expected to create approximately 60 jobs during construction, many of which can be sourced from the County and adjacent areas. As many of the required construction workers would be sourced as locally as possible based on the qualifications of the task being performed. The Project would be operated remotely but would require periodic maintenance to be performed by regional employees and contractors.

The Project would generate tax revenue for the County during construction and operations; however, the total tax revenue has not been calculated at this time but will be based on the total Project cost during construction.

4.1 Battery Energy Storage System

The Project would include placement of battery energy storage enclosures and associated electrical equipment, including medium voltage transformers and power conversation systems.[1] Each unit will consist of a storage enclosure/non-occupiable steel cabinet that houses battery modules and power conversion system equipment. The battery storage units are pre-fabricated off site and arrive to the site ready to be installed and operated. The actual number of energy storage enclosures and types are approximate and subject to change based on available battery technology at the time of construction. Each battery energy storage enclosure would have insulation, a module cooling system, a battery management system, fire detection equipment, power conversion system (PCS) equipment containing the electronic controls, inverters, and a separate medium voltage step-up transformer. The primary storage components would consist of self-contained electrochemical battery systems using conventional storage technologies with proven safety and performance records. The BESS enclosures would be designed such that the periodic maintenance and replacement of underperforming battery components can be easily performed on an as-needed basis without replacing the entire module. The battery energy storage enclosures supplier has not been selected at this time; however, dimensions are expected to be approximately 20 feet long, 8 feet wide, and 12 feet high.

Fire detection measures are intrinsically incorporated in the Project design in accordance with National Fire Protection Association safety standards. It should be noted that selection of batteries that would be used are not yet finalized; as such, the capacity and size of the enclosures may change, as may the ratings of the conversion equipment (inverters and transformers). The number of enclosures, inverters, and transformers and expected total megawatt capacity are an estimate based on currently available technology as the storage industry has matured in the last few years and continues to mature. While the components and total megawatts of the Project may change, the overall size of the area for the Project will remain consistent.

[1] Battery energy storage containers are manufactured by Hithium, Sungrow, Tesla, Fluence, CATL, LG Chem, and a number of other manufacturers. A specific technology has not been selected at this time and will be finalized during detailed design.

Individual lithium-ion, or similar technology, battery cells form the core of the BESS. Cells are assembled either in series or parallel connection in sealed battery modules. The battery modules would be installed in self-supporting racks electrically connected either in a series or parallel to each other. The individual battery racks are connected in series or parallel configuration to deliver the BESS power rating. The battery racks would be fused. At this time, the battery technology for the Project has not yet been finalized; Blackberry Grove will determine battery type based on the technology available at the time of construction.

The BESS facility would be unstaffed and would include remote operational control; inspections/maintenance would be performed as necessary. The BESS facility would be uninhabited with no bathroom facilities, running water, or permanent office space. Project operations would be monitored remotely through the SCADA system adjacent to the collector substation. Periodic inspections and maintenance activities would occur on the Project site.

4.1.1 Fire Protection System

Should a thermal event occur, the BESS units are designed and certified so that fire will not propagate from one cabinet to the neighboring cabinet. Any exhaust created by a thermal event would be similar to a Class A Fire, which is a fire that consists of ordinary combustibles such as wood, paper, fabric, and plastic. In addition, electrolyte added to the cells during manufacturing is fully absorbed into the cell material and enclosed within the cell casing, which eliminates the risk of material leaking from the cell even if water is applied for fire suppression.

Fire protection would also include multiple fire detection systems on site and within the individual BESS units. Each BESS unit contains an onboard battery management system that monitors the appropriate state of individual battery cells and relays information 24-7. In the event of an anomaly, the system is designed to remove power from the affected cells.

Pursuant to manufacturer specifications, the BESS units are fully certified to the most rigorous international safety standards. This includes the following select certifications:

- UL 1642 – Standard for Lithium Batteries (cell level certification)
- UL 1973 – Standard for Batteries for Use in Stationary Applications (module level certification)
- UL 9540 – Standard for Energy Storage Systems and Equipment (system level certification)
- UL 9540A – Standard for Inverters, Controllers, Converters, and Interconnection Equipment for DER
- IEC 62619 – Standard for Battery Safety in Stationary Applications

The Tualatin Valley Fire & Rescue (the authority having jurisdiction) would have review and approval rights for the facility fire protection and suppression plans. Blackberry Grove is in the process of preparing materials such as a Hazard Mitigation Analysis, Emergency Response Plan and Fire Master Plan to provide to for review.

4.1.2 Battery Energy Storage System Enclosures and Controller

The BESS batteries, battery racks, cooling system, direct-current disconnect, and other ancillary equipment would be housed in outdoor-rated enclosures. BESS enclosures height is not expected to exceed 12 feet. The structures may also have a heating, ventilation, and air conditioning (HVAC) system for optimal performance and safety. Power

for the HVAC system, lighting, and other electrical systems would be provided through a connection to the on-site station service transformer with connection lines installed above and/or below ground.

The BESS controller would provide a system of controls for the battery modules, inverters, medium-voltage system, and up-to-the-point of connection with the electrical grid. The controllers would ensure that the BESS effectively responds to grid emergency conditions and would provide a secondary safety system designed to safety shutdown the facility.

4.1.3 Power Conversion System

The Power Conversion System (PCS) would consist of an inverter, a medium-voltage transformer, protection equipment, direct current (DC) and alternating current (AC) circuit breakers, harmonic filters, equipment terminals, and connection cabling system. The PCS may consist of standalone units connected to multiple BESS enclosures, or they can be integrated into the BESS enclosures themselves. Electric energy would be transferred from the existing power grid to the Project batteries during a battery charging cycle, and from the Project batteries to the power grid during a battery discharge cycle. The PCS would convert electric energy from AC to DC when the energy is transferred from the grid to the battery, and from DC to AC when the energy is transferred from the battery to the grid. The energy conversion is enabled by a bi-directional inverter that connects the DC battery system to the AC electrical grid. The PCS would also include a transformer that transforms the AC side output of the inverter to medium-voltage AC (34.5 kV) to increase the overall efficiency of the BESS and to protect the PCS in the event of system electrical faults.

4.2 Project Collector and Portland General Electric Substation

The Project collector substation would be the termination point of the collection system of 34.5 kV AC electricity. The power to and from the BESS would be passed through a final interconnection step-up transformer to transform it from 34.5 kV to 115 kV. The open-air collector substation would be constructed on site and connect to the existing PGE West Union substation via a new generation transmission line.

4.3 Operations and Maintenance

Once constructed, the Project is expected to operate 7 days per week, 365 days per year. The facility would be remotely monitored by the original equipment manufacturer and Blackberry Grove or an affiliated company. Project operations would be monitored remotely through the SCADA system. The Project would include one single-story control shelter project equipment, including the SCADA system, relays, and battery backup (approximately 400 to 700 square feet and a height of about 15 feet) near the collector substation. The Project would also include up to three conditioned trailers of approximately similar size and dimension as a 40-foot International Organization for Standardization (ISO) enclosure, which are intended to be used for operations and maintenance personnel for parts storage and temporary workstations. Periodic augmentation of batteries within the Project site would occur to maintain the capacity over an approximate 30-year life. Occasionally, on-site maintenance would be required, which would include replacement of inverter power modules, filters, and miscellaneous electrical repairs on an as-needed basis. No permanent sanitary facilities would be required.

During Project operation, operation and maintenance staff would visit the substation periodically for switching and other operation activities. Maintenance trucks would be utilized to perform routine maintenance, including but not limited to equipment testing, monitoring, repair, routine procedures to ensure service continuity, and standard preventative maintenance.

Routine operations would require one or two workers in a light utility truck to visit the facility on a semi-monthly basis. Typically, one major maintenance inspection would take place annually.

4.4 Transmission Line

The energy would be transported to and from the Project collector substation to the existing PGE West Union substation via a proposed generation transmission line. The proposed transmission line would connect the collector substation with the West Union substation, located just across Northwest West Union Road, to the south.

4.5 Perimeter Fencing, Signage, Landscaping, and Lighting

The perimeter of the Project would be enclosed by an approximately 12-foot-tall precast concrete wall and/or 8-foot-tall chain-link perimeter security fence topped with 1 foot of barbed wire. Landscaping would consist of the existing significant mature trees surrounding the site, to remain, and would be augmented as needed to meet screening and County Code requirements. Primary access into the Project would be via Northwest West Union Road.

Low-elevation controlled security lighting would be installed at the access gate, the collector substation, and the entrance to the Project. Lighting would only be switched on when personnel enter the area through a manual activation (switch). Lighting would only be in areas where it is required for safety, security, or operations, and would be directed on site and include shielding as necessary to minimize illumination of the night sky or potential impacts to surrounding viewers.

4.6 Construction

Construction would be primarily composed of the following activities:

- **Site Preparation:** The site would be prepared for construction. For example, rough grading may be performed where required to accommodate the support structures and all weathered access roads. Retention basins, if required, would be created for hydrologic control. All weathered access roads would be gravel or aggregate base depending on the final site geotechnical report. A temporary staging area would be constructed to hold materials and construction equipment.
- **Fencing:** An approximately 12-foot-tall precast concrete wall and/or 8-foot-tall perimeter security fence or wall that may be topped with 1 foot of barbed wire perimeter security fence would be installed around the BESS facility.
- **Electrical Work:** A substation pad for the step-up transformer would be poured, followed by the installation of the medium-voltage stations, wiring of the modules through combiner boxes, and construction of the Project

substation and grid interconnection. The medium-voltage stations would sit on concrete foundations or driven piles, pending final design.

The Project is anticipated to be built over an approximately 12-month period from the onset of site preparation activities through testing and commissioning of the facility. It is anticipated that construction crews would work 8 or 10 hours per day, with work occurring Monday through Friday. Overtime and weekend work would be used only as necessary to meet scheduled milestones or accelerate schedule and would comply with applicable Oregon labor laws and County limitations on working hours. Estimated durations of construction activities are presented in Table 1.

Table 1. Estimated Construction Activity Duration and Workforce for Each Phase

Construction Activity	Approximate Duration	Expected Construction Workforce (Number of Employees)
Site preparation	4 weeks	60
Grading	6 weeks	60
BESS installation	24 weeks	60
Project substation installation	12 weeks	60
Interconnection installation	3 weeks	20
Commissioning	6 weeks	20

Although the Project site is fairly level, grading would be required, especially for the construction of roads, on-site substation, the battery enclosures, and inverter pads. This would be accomplished with scrapers, graders, water trucks, dozers, and compaction equipment. The enclosures would be off-loaded and installed using cranes, boom trucks, forklifts, rubber-tired loaders, rubber-tired backhoes, and other small- to medium-sized construction equipment, as needed. Construction equipment would be delivered to the site on low-bed trucks unless the equipment can be driven to the site (e.g., boom trucks).

4.7 Traffic

Access to the Project site would be from an existing driveway off Northwest West Union Road. Construction of a secondary access point is being considered via Northwest Bendemeer Road. Delivery of material and supplies would reach the site through on-road truck delivery. The majority of the truck deliveries would be for the enclosures with batteries, as well as any aggregate material that may be required for site preparation. The heaviest delivery loads to the site would consist of rock truck deliveries, concrete trucks, and the high-voltage step-up transformer. Typically, the rock would be delivered in “bottom dump trucks” or “transfer trucks” with six axles. Low-bed transport trucks would transport the construction equipment to the site as needed. The size of the low-bed trucks (axles for weight distribution) would depend on the equipment/materials transported.

4.8 Water Use

Water consumption during construction would be required for dust suppression and earthwork. Construction and operational water would be provided by on-site groundwater through an improved existing well, a new well permitted

and drilled (if necessary), or through off-site source delivered by truck. Any existing wells on site that are not used for the Project would be properly abandoned.

4.9 Decommissioning

In general, the BESS would be recycled at the expiration of the Project's life (approximately 30 years). Most parts of the proposed system are recyclable. Batteries include lithium-ion, which degrades but can be recycled or repurposed. Site structures would include steel or wood and concrete. All of these materials can be recycled. Concrete from deconstruction would be recycled. Local recyclers are available. Metal and scrap equipment and parts that do not have free-flowing oil may be sent for salvage.

Fuel, hydraulic fluids, and oils would be transferred directly to a tanker truck from the respective tanks and vessels. Storage tanks and vessels would be rinsed and transferred to tanker trucks. Other items that are not feasible to remove at the point of generation, such as smaller enclosure lubricants, paints, thinners, solvents, cleaners, batteries, and sealants, would be kept in a locked utility structure with integral secondary containment that meets Certified Unified Program Agencies and Resource Conservation and Recovery Act requirements for hazardous waste storage until removal for proper disposal and recycling. It is anticipated that all oils and batteries would be recycled at an appropriate facility. Site personnel involved in handling these materials would be trained to properly handle them. Enclosures used to store hazardous materials would be inspected regularly for any signs of failure or leakage. Transportation of the removed hazardous materials would comply with regulations for transporting hazardous materials, including those set by the U.S. Department of Transportation, the U.S. Environmental Protection Agency, Oregon Department of Transportation, Oregon Department of Environmental Quality, and Oregon State Fire Marshal.

5 Representative Project Photos

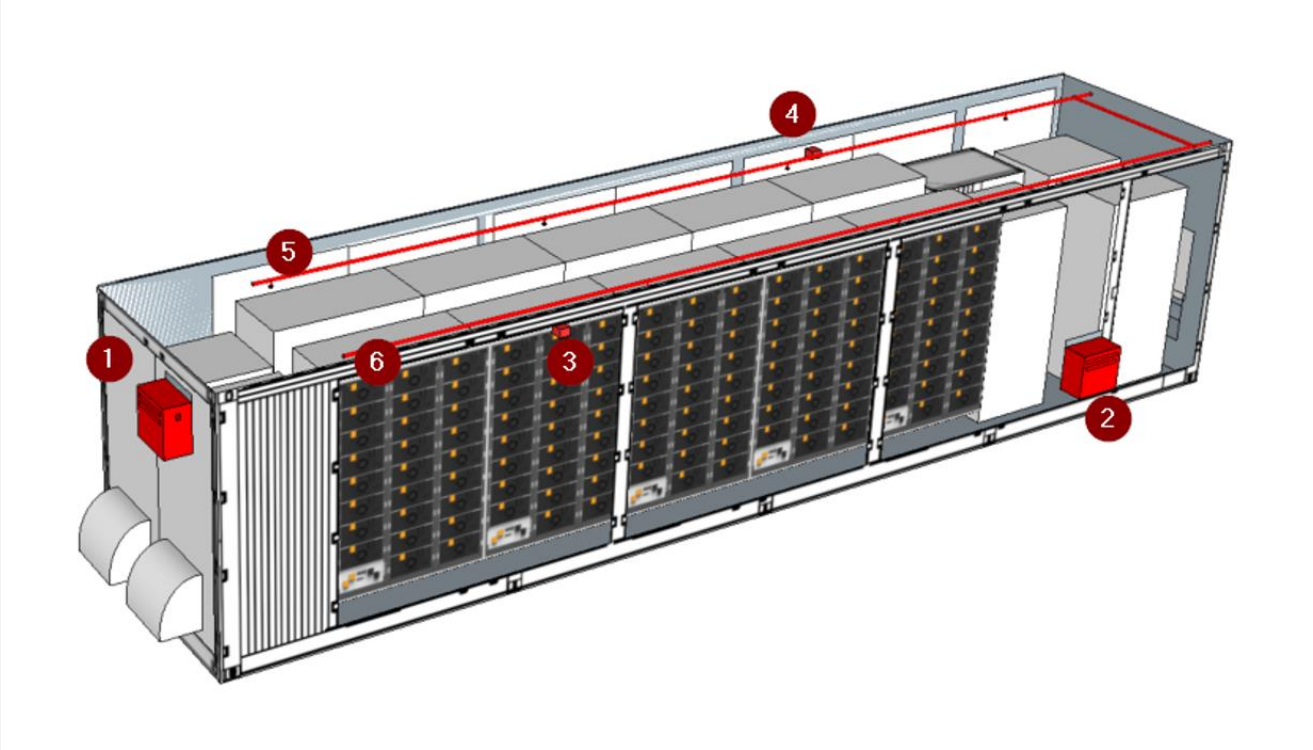

Photo 1: Overview of a typical Battery Energy Storage System (BESS) enclosure. (1) Motorized louvered fan exhaust – extracts gas, (2) Motorized louvered fan Inlet – brings in fresh air, (3) Combustible gas sensor, (4) Smoke Detector, (5) Duct work to direct air as needed and (6) Dry Pipe/Deluge connected to FDC

Photo 2: Overview of a typical BESS Project site. (1) Battery energy storage system enclosures (2) Power Conversion Systems (inverters / transformers), (3) Electric control equipment, (4) Step-up transformer and Project collector substation, including lightning protection, a control enclosure, and internal fencing, (5) Communications equipment, (6) 69 tie-line and utility interconnection, (7) perimeter screening wall and security gate

6 References

Dudek. 2024. Biological and Aquatic Resources Preliminary Assessment Results for the West Union Memorandum.

NRCS (Natural Resources Conservation Service). 2017. *USDA NRCS Monarch Butterfly Wildlife Habitat Evaluation Guide and Decision Support Tool: Western U.S. Edition.* Accessed July 2024. https://efotg.sc.egov.usda.gov/references/Public/OR/Western_Monarch_WHEG_Instructions_March_2017.pdf.

USDOE (US Department of Energy). 2013. "Grid Energy Storage." December 2013.

USFWS (U.S. Fish and Wildlife Service). 2024a. IPaC: Information for Planning and Consultation. Online project planning tool. Accessed July 2024. https://ecos.fws.gov/ipac/.

USFWS. 2024c. National Wetlands Inventory: Wetlands Mapper. Accessed July 2024 https://www.fws.gov/wetlands/data/Mapper.html.

Washington County. 2022. Comprehensive Plan. https://www.washingtoncountyor.gov/lut/planning/planning-documents.

Washington County. 2023a. "Land Use Districts (Zoning/Plan)." https://washcoopendata-washco.hub.arcgis.com/datasets/cf29c9cf744744739d0e34e8ddf954bd_2/explore?location=45.568559%2C-122.900907%2C16.88.

Washington County. 2023b. General Ordinances. https://library.municode.com/or/washington_county/codes/code_of_ordinances?nodeId=WACO.

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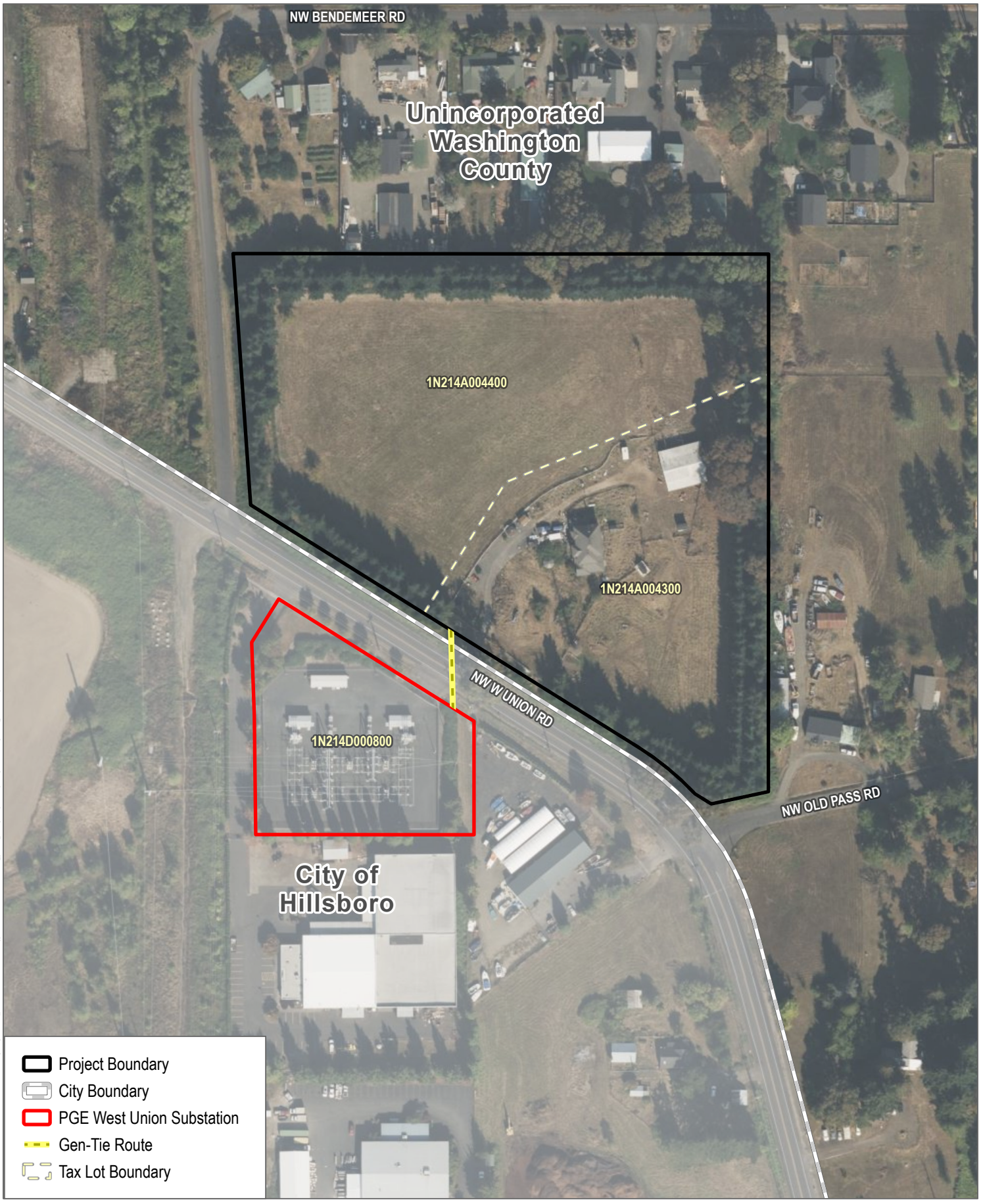

SOURCE: Bing Maps 2023; OR Geohub 2024, Washington County 2024

DUDEK

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FIGURE 1

Project Site

West Union Energy Storage Project

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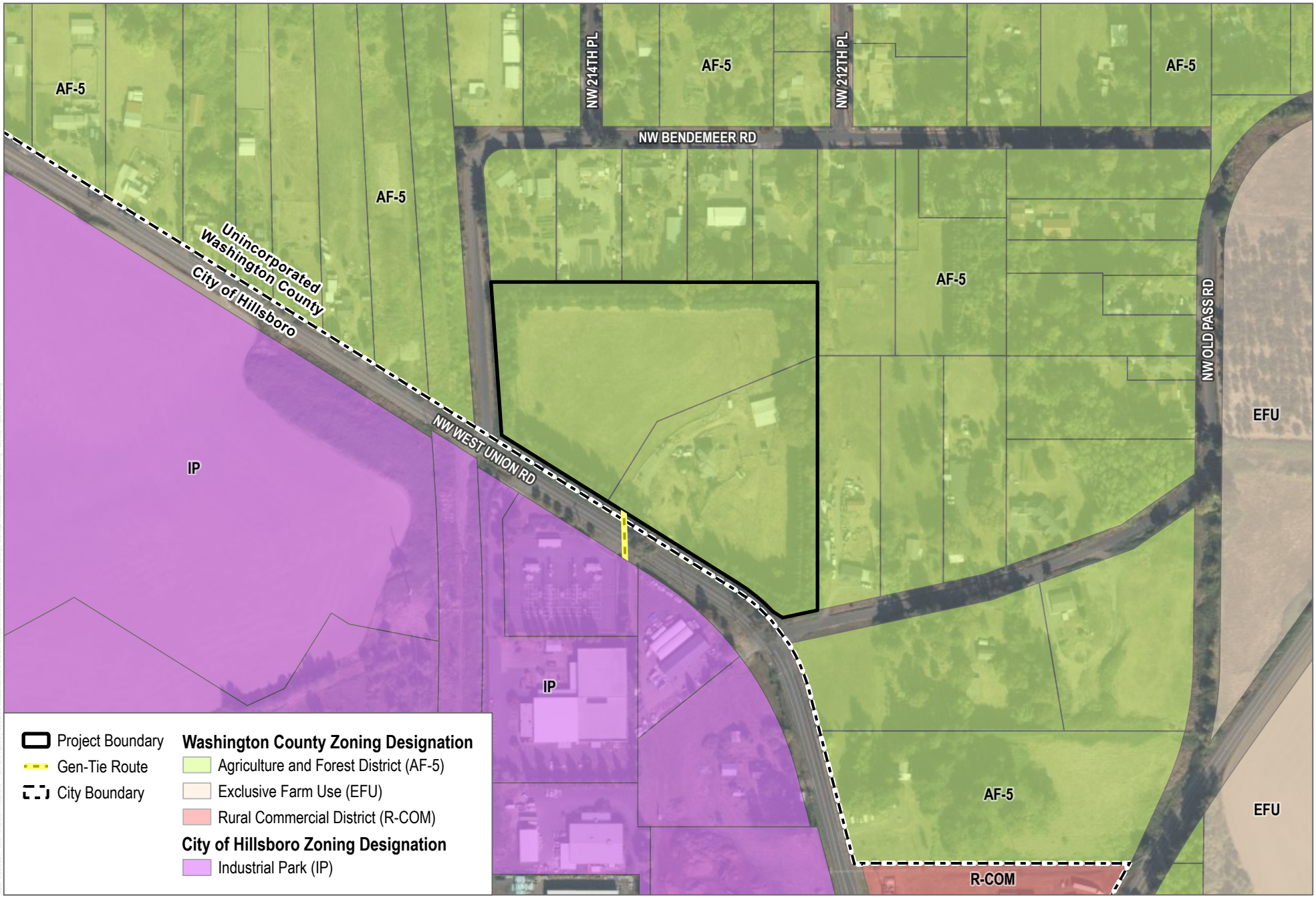

SOURCE: Bing Maps 2023; City of Hillsboro 2023; County of Washington 2023

DUDEK

0 210 420 Feet

FIGURE 2

Zoning

West Union Energy Storage Project