

# Goose Prairie Solar

Public Information Meeting

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## **OneEnergy Renewables**

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## **Stoel Rives, LLP**

Timothy McMahan, Counsel

# Agenda

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- Introduction
- Solar Basics
- Location
- Design, Construction and Operations
- Consultation and Analysis
- Project Status and Next Steps
- Questions and Discussion



# Introduction

# OneEnergy Overview

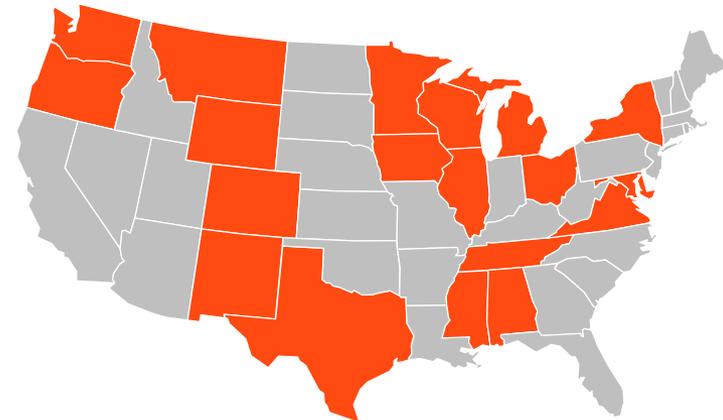
OneEnergy is a privately held developer of utility-scale and community solar projects across the U.S.

- 30 employees, headquartered in Seattle with offices in Oregon, Wisconsin, Colorado, and Washington DC
- Founded in 2010, OneEnergy has a proven track record of project development and delivery, with more than 700MW in operation.
- With an active solar and storage pipeline of over 1 GW, OneEnergy has extensive project development experience and the scale to help you achieve the lowest cost energy.
- Experience working with investor-owned utilities, public power, and commercial & industrial customers.



## Geographic Diversity

Project development presence in the U.S.



# Technical Support



# Solar is a Great Washington Product



- Washington is a national leader with the Clean Energy Transformation Act (CETA) passed by legislature in 2019.
  - 100% greenhouse gas neutral by 2030.
  - 100% clean energy requirement by 2045.
- Compatible with agriculture and supplemental income for landowners
  - No impacts to common local farming practices
  - Non-permanent use – land restored at end of project life and landowners can return to agricultural use
  - Panels are no taller than an average apple tree, and projects are quiet, emissions-free, and low-maintenance
  - Project area re-seeded after construction with native seed mix, improving local water and soil quality
- Production profile that correlates well with peak demand (especially in summer), modular scaling no intensive use of water, and zero fuel price risk.

# Washington Communities Benefit From Solar





# Solar Basics

# Basic Components

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## Panels

- Photovoltaic cells made of crystalline silicon convert sunlight to electricity.
- Individual cells are connected together and sandwiched between glass and a polymer back sheet. An aluminum frame provides the panel's structure.
- Anti-reflective coating on the glass exterior reduces energy lost to reflection.



## Racking

- Steel racking system supported by steel posts
- Tracking technology maximizes energy production by following the sun throughout the day
- Minimally invasive mounting systems for easy reclamation

# Basic Components

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## Inverters

- Inverters convert solar energy into a form the electrical grid can use.
- Each inverter coupled with a medium voltage step-up transformer to increase the voltage of the power



## Interconnection Infrastructure

- Main step-up transformer to utility voltage.
- Control house with protective equipment
- Placed a safe distance from any public access on a secure cement pad.

# Basic Components



## Battery Energy Storage System

- Optional equipment with the potential to store and smooth the variable renewable generation with array of benefits.
- Equipment listed or certified by Underwriters Laboratory (UL)
- Built in accordance with National Fire Protection Association (NFPA) Standards and fire codes.



# Basic Components

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## Fencing

- A security fence up to 8 feet in height will be installed around the perimeter.
- Fence height and gates in accordance with County and emergency services access needs.



## Roads

- Low impact maintenance roads
- Fire vehicle turnarounds
- Access roads 20' wide per International Fire Code.



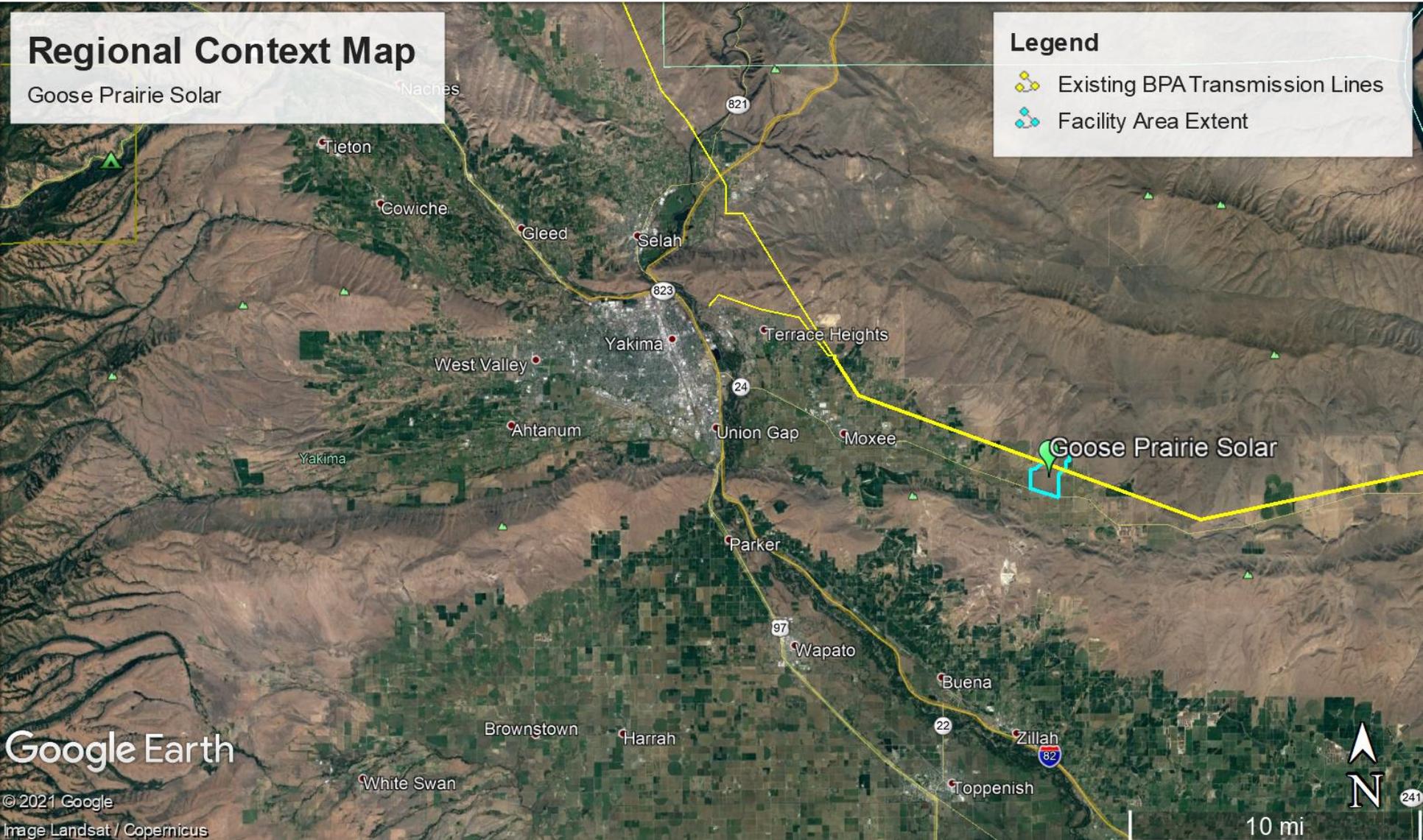
# Location

# Regional Context Map

Goose Prairie Solar

## Legend

-  Existing BPA Transmission Lines
-  Facility Area Extent



Google Earth

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Image Landsat / Copernicus



# Global Solar Radiation at Latitude Tilt - Annual

## Washington



Model estimates of monthly average daily total radiation, averaged from hourly estimates of direct normal irradiance over 5 years (1998-2002). The model inputs are hourly visible irradiance from the GOES geostationary satellites, and monthly average aerosol optical depth, precipitable water vapor, and ozone sampled at a 50km resolution.



Produced and published by the National Renewable Energy Laboratory for the U.S. Department of Energy September 2003

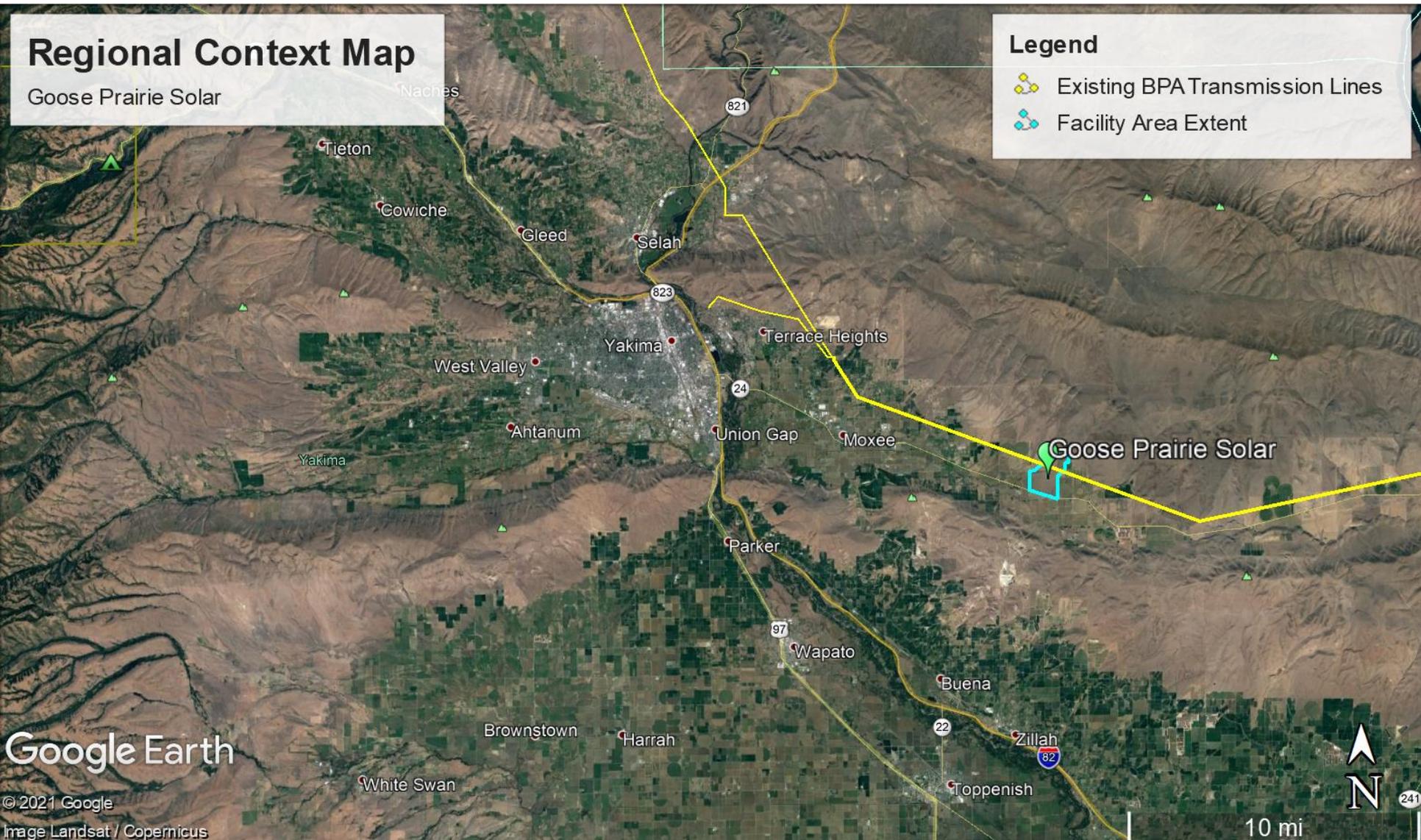


# Regional Context Map

Goose Prairie Solar

## Legend

-  Existing BPA Transmission Lines
-  Facility Area Extent



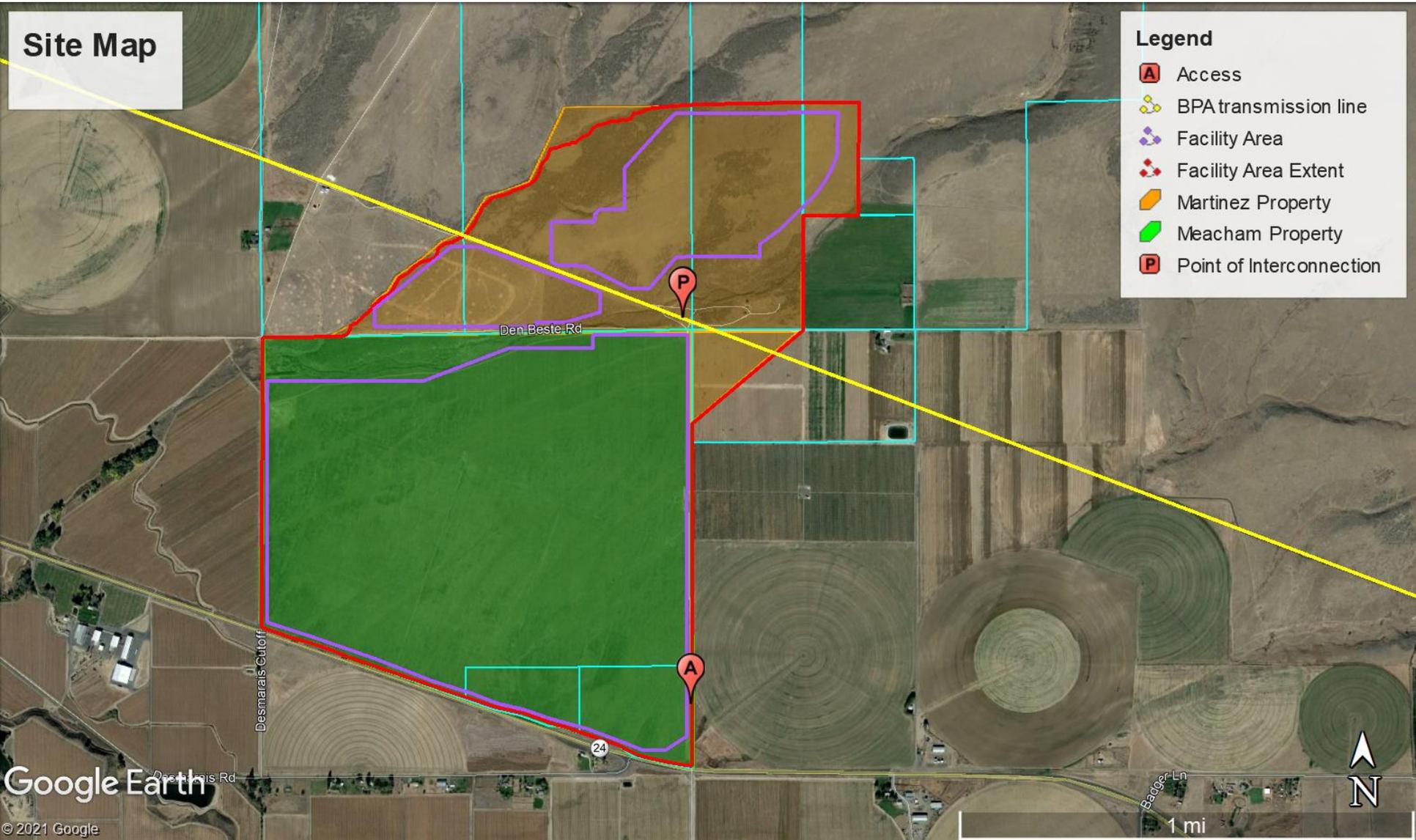
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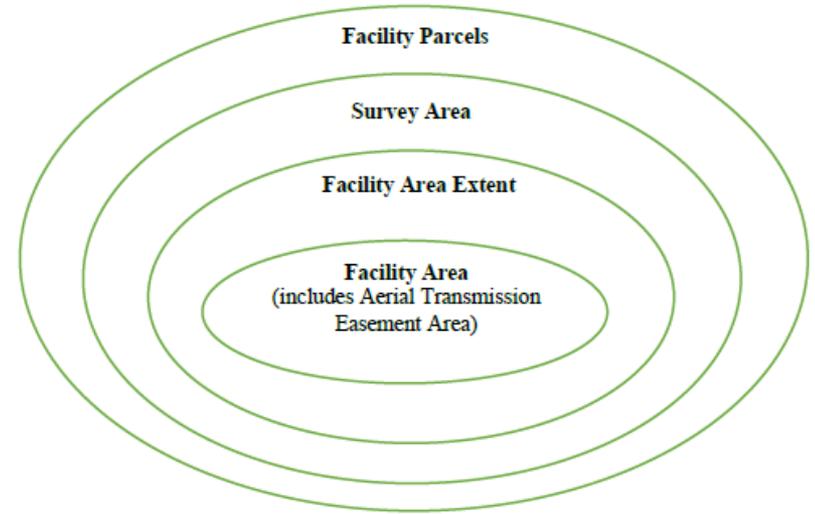
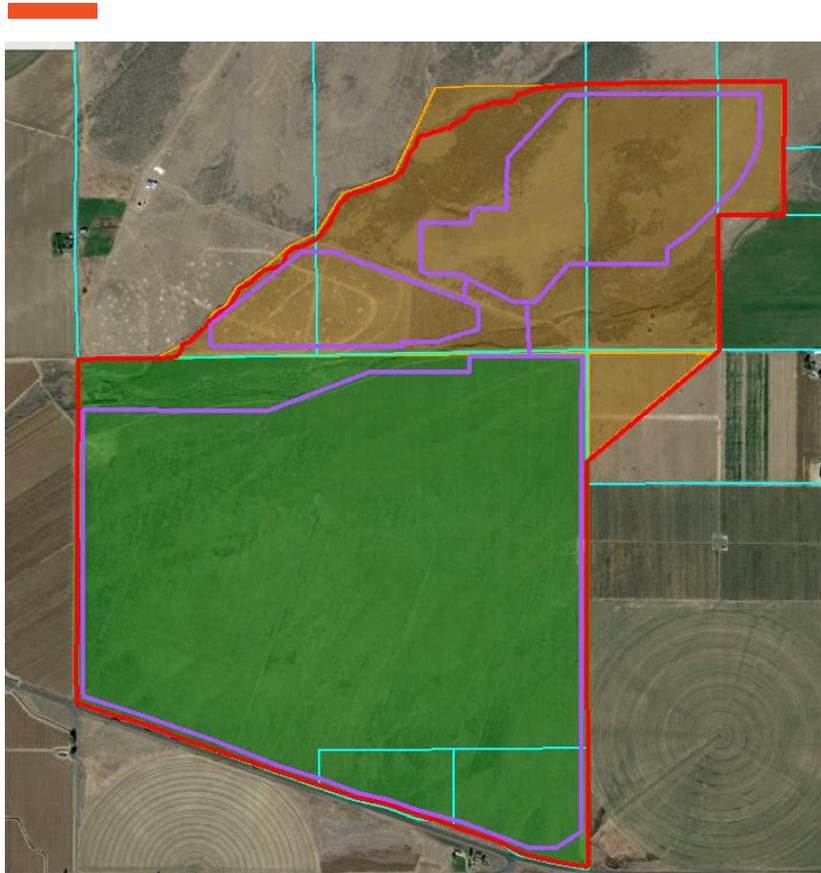
# Site Map

## Legend

-  Access
-  BPA transmission line
-  Facility Area
-  Facility Area Extent
-  Martinez Property
-  Meacham Property
-  Point of Interconnection



# Area Definitions



## Legend

-  Facility Area
-  Facility Area Extent
-  Facility Parcel Boundaries
-  Martinez Property (portion of Survey Area)
-  Meacham Property (portion of Survey Area)

**Facility Area Extent:** Micrositing boundary within which the **Facility Area** will be wholly encompassed.

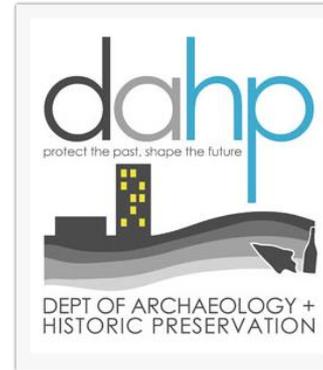


# Design, Construction and Operations

# Stakeholders/Consultation



Washington  
Department of  
**FISH and  
WILDLIFE**





# Construction

- Schedule
  - 9-12 months
  - Start early 2022
- Jobs
  - Estimated 300 at peak
  - Up to 60% hired locally
  - Trades
    - Electricians
    - Equipment operators
    - Truck drivers
    - General laborers



# Operations and Maintenance

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- Project Life
  - Expected 35 years
  - Potential for updated equipment to extend life
- Minimal on-site maintenance
  - Remotely monitored
  - Routine and as-needed maintenance checks
  - Vegetation management
  - Panel washing

# Decommissioning and Site Restoration

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- Initial Site Restoration Plan
  - Objective to restore the site to pre-Facility condition or better
  - Removal of equipment
  - Restoration of any disturbed soils
  - Provisions for funding or bonding arrangements



# Consultation and Analysis

# Earth

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- Geotechnical Site Investigation and Critical Areas/Geohazards Report
  - Not at risk from flooding, steep slopes or hazards associated with alluvial fan deposits.
  - Not a threat to the public health, safety, or welfare of the citizens.
  - Will not increase the risk from geologic hazards on the site or to the surrounding properties.
- Potential Impacts
  - Erosion
- Mitigation
  - Geotechnical recommendations
  - Erosion and Sediment Control Plan
  - Stormwater Pollution Prevention Plans
  - Vegetation and Weed Management Plan

# Air

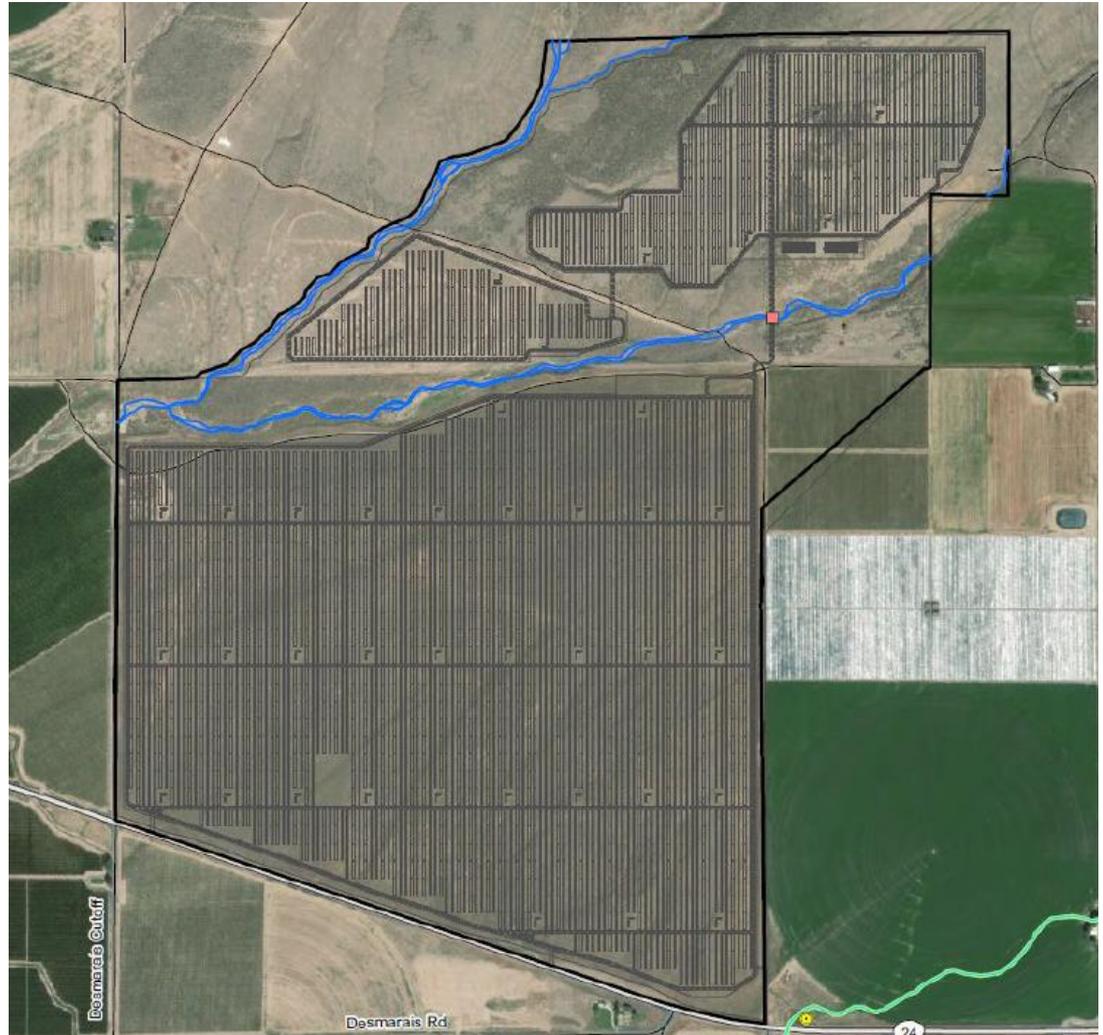
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- Potential Impacts
  - Vehicle exhaust emissions, fugitive dust particles and potential temporary concrete batch plant
  
- Mitigation
  - Adherence to applicable federal and state laws
  - Best management practices for dust management and limiting vehicle emissions

# Wetlands and Surface Waters

- Studies/Consultation
  - Wetland Delineation Report
  - Finding: Ephemeral Type 5 Streams
  - Dept of Ecology
  - Army Corps of Engineers
  
- Potential Impacts
  - Bridge or culvert/ford stream crossing
  
- Mitigation
  - Yakima County: no buffer required
  - Avoiding streams with a 50-foot buffer
  - Stream crossing designed and constructed following state and local regulations



# Stormwater Runoff

- Studies/Consultation
  - Phase I ESA and geotechnical report
  - Department of Ecology
  
- Potential Impacts
  - Surface water runoff and infiltration
  
- Mitigation
  - Construction Stormwater General Permit
    - Erosion and Sediment Control Plan
    - Stormwater Pollution Prevention Plan
  - Vegetation and Weed Management Plan
  - Spill Prevention, Control and Countermeasures Plan

# Wildlife & Plants

- Desktop Due Diligence
  - WDFW Priority Habitat and Species
  - USFWS Information for Planning and Consultation
- Consultation with WDFW

Date	Consultation
Fall 2017	Outreach for initial site 12 miles east. Feedback led to new site.
Summer 2018	Consultation regarding Meacham site.
Spring 2019	Site visit with WDFW.
Spring 2020	Consultation update including Martinez site.

- Studies and Reports
  - Wildlife and Habitat Survey Report
  - Review of Rare Plant Occurrence and Big Game Movement
  - Habitat Mitigation Memo

# Wildlife & Plants

- Mitigation

- Moved site to less ecologically sensitive area
- Avoiding sage draw
- Fence adjustments
- Utilizing CRP and previously impacted areas
- Best Management Practices
- Revegetation
- Habitat Restoration and Mitigation Plan



# Environmental Health - Hazardous Materials

- Consultation
  - East Valley Fire Department and Yakima County Fire Marshal
  
- Fire Safety Mitigation
  - Electrical Codes, Fire Codes and UL certification
  - Electrical Permit
  - Emergency Plans
  - Training
  
- Battery Energy Storage System
  - National Fire Protection Association (NFPA) Standards
    - NFPA 855 – Standard for the Installation of Stationary Energy Storage Systems.

# Land Use

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- Consultation
  - Ongoing consultation with Yakima County since Oct 2017
- Land Use Consistency Review
  - Consistent with Yakima County Code and Comprehensive Plan
  - Comply with all setbacks and environmental regulations
- County Certification of Zoning Compliance
  - Allowable as a Type 3 use in the Agricultural zone subject to a conditional use permit



# Noise

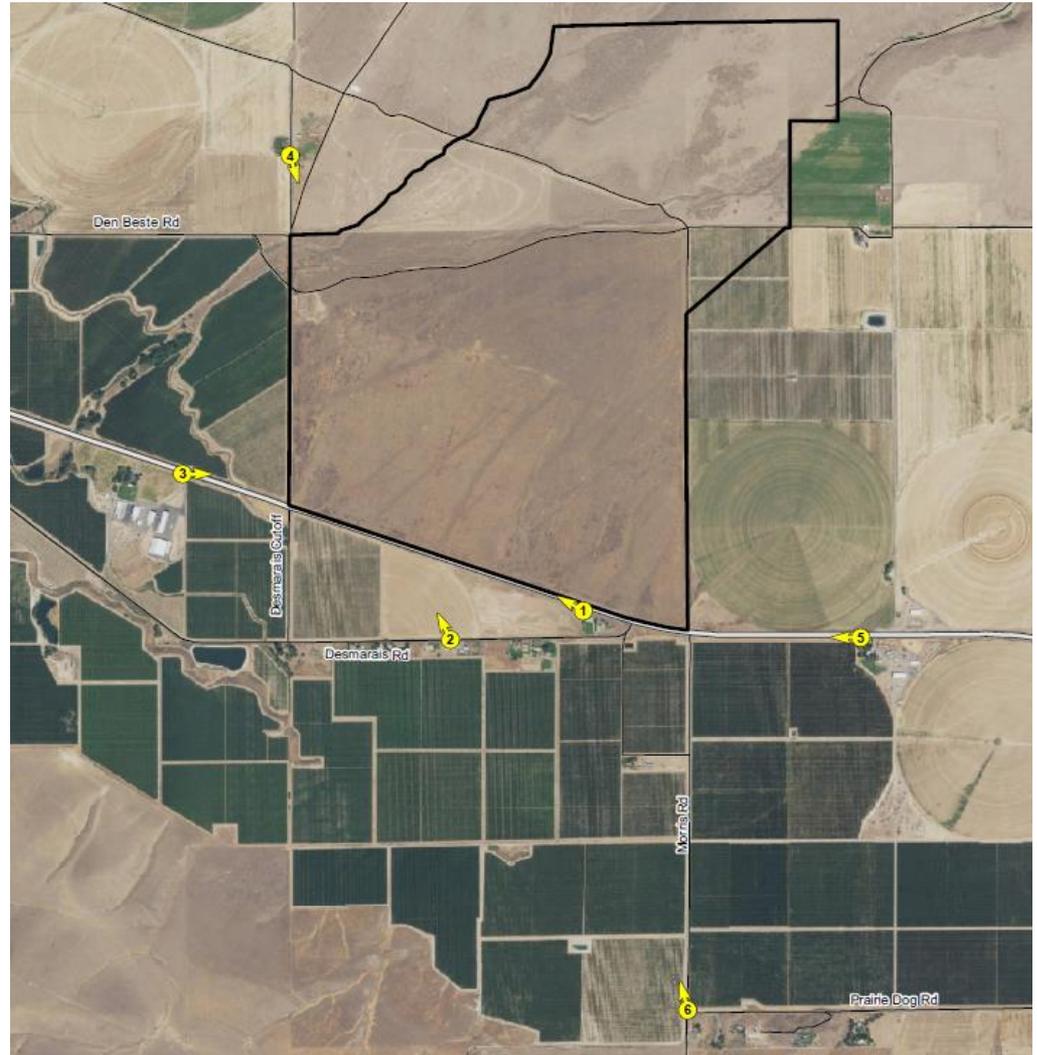
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- Studies
  - Acoustic Assessment Report
- Impacts
  - Construction noise
  - Operational noise
    - Below state law limits at all residences
  - Sound generated from highway and agricultural operations are expected to be relatively higher than Facility operations.
- Mitigation
  - Limiting construction to daytime hours
  - Complaint resolution procedure to address neighbor concerns

# Light, Glare and Aesthetics

- Visual Impact Assessment
  - BLM Visual Resource Management system
  - Key Observation Points
- Results
  - Minor to moderate impacts





# Light, Glare and Aesthetics

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- Solar Glare Reports
  - ForgeSolar
  - Results
    - No glare expected at residences or for aircraft
    - No glare expected for motorists on State Route 24
    - Some glare for motorists driving along Morris Lane and Desmarais Cutoff
- Federal Aviation Administration and Department of Defense
  - Determination of No Hazard
  - No direct impacts to military operations

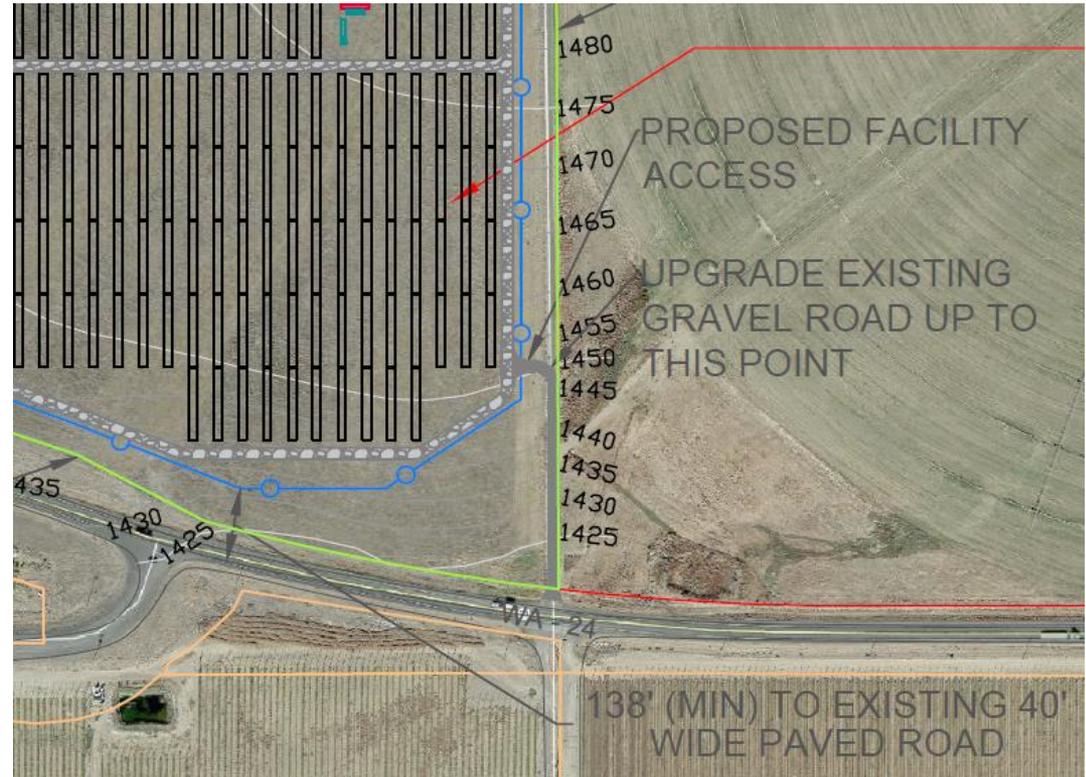
# Cultural and Archaeological

- Consultation
  - Department of Archaeology and Historic Preservation
  - Yakama Nation
- Studies
  - Cultural Study
- Impacts
  - Currently designed to avoid all protected resources
  - If impacts to protected resources, all laws and regulations will be followed.
- Mitigation
  - Avoidance and/or Permits
  - Unanticipated Discovery Plan
  - Ongoing consultation



# Traffic

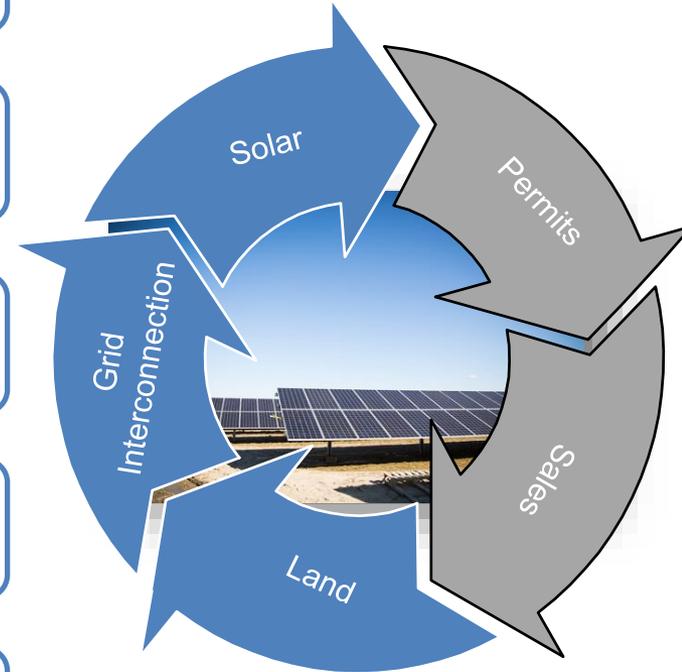
- Consultation
  - WA Dept of Transportation
- Travel Route and Approach
  - State Route 24 to private road
  - Deeded approach at SW corner
- Construction Traffic
  - 184 round trips/day
- Operations Traffic
  - Limited routine maintenance
- Mitigation
  - WSDOT General Permit
  - Traffic Control Plan





# Project Status and Next Steps

# Project Status



# Questions and Discussion

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**Thank you!**

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