

# Overland Pass Energy East

Sedgwick County, CO

July 18<sup>th</sup>, 2023



# Applicant Staff Present

## **National Renewable Solutions:**

Alex Ingulsrud, Senior Project Developer

Brenda Moore, Director of Wind Energy

Brad Wilson, Sr. Vice President of Development

Walt Page, Project Developer

## **Westwood Professional Services:**

Erica Pratt, lead Environmental Biologist

Scott Lesikar, Renewable Energy Permitting Specialist

# Agenda

NRS Company Background & Community Engagement

Project Facts & Location

Development Progress To Date

Special Use Permit Application

- Application Contents

- Approval Criteria

- Requested Conditions

Continued Development & Schedule

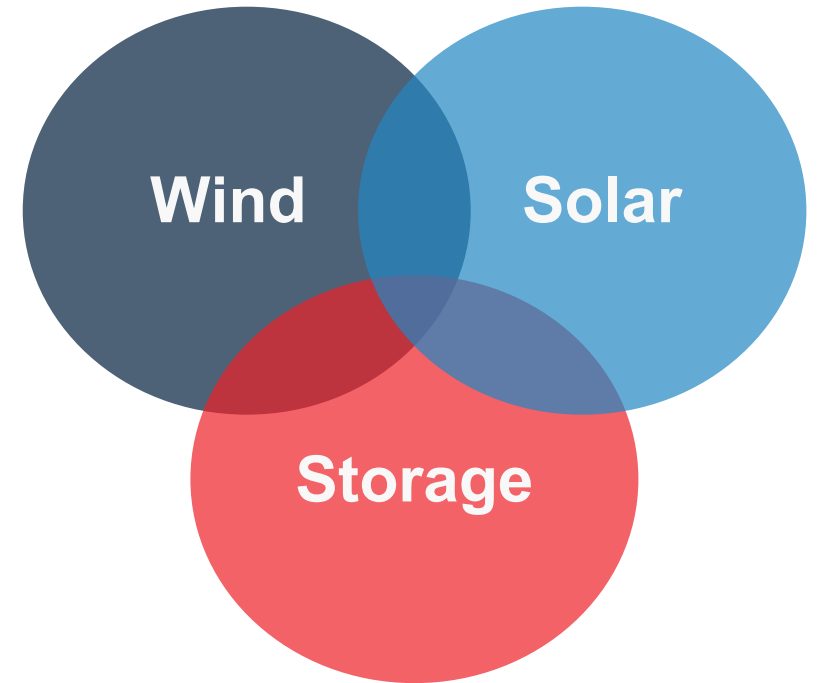
Project Benefits

# National Renewable Solutions (NRS)

NRS is the developer of the Overland Pass Energy East wind project



- NRS is a US-based renewable energy company (HQ in Minnesota)
- Our model is to partner closely with landowners and communities interested in harvesting the wind



# Who We Are

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NRS is a renewable energy company founded in 2011 and based in Minnetonka, Minnesota. NRS originates, acquires and develops renewable energy projects throughout the US at various stages, including from greenfield through operations

- Our corporate history represents a wind and solar portfolio of over 1 GW of either operating or projects in construction, demonstrating a strong track record in a competitive field.
- Our current active development portfolio comprises over 4 GW of renewable projects.



## A True Community Model

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We believe local community members should have a voice in our large-scale energy projects. That's why we build our projects with landowners and the community in mind, ensuring maximum transparency that allows area residents to participate in ways that produce economic growth for their community.



# Project Facts

**Name:** Overland Pass Energy East

**Location:** Sedgwick County, CO  
("South Table")

**Planned Nameplate Capacity:** 750 MW

**Land Area of Site in Application:** 69,907 acres

**Planned Turbine Sites:** 182 Turbines (167 + 15 alternates)

# Project Facts

**Planned Turbine  
Technology:**

Vestas V163 104hh 4.5 MW  
609 ft tip height

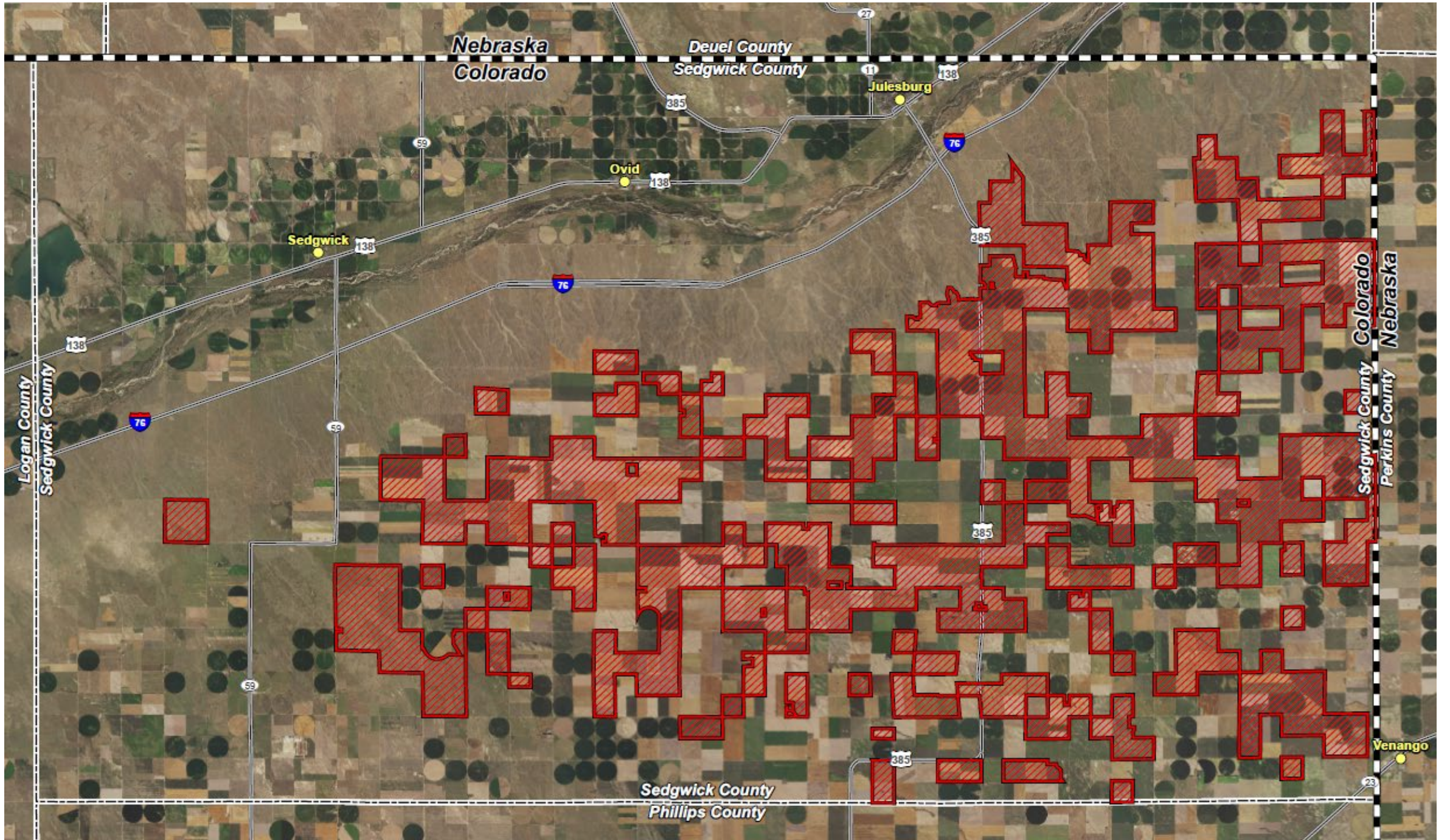
**Above-ground  
Infrastructure:**

Less than an acre per turbine, average

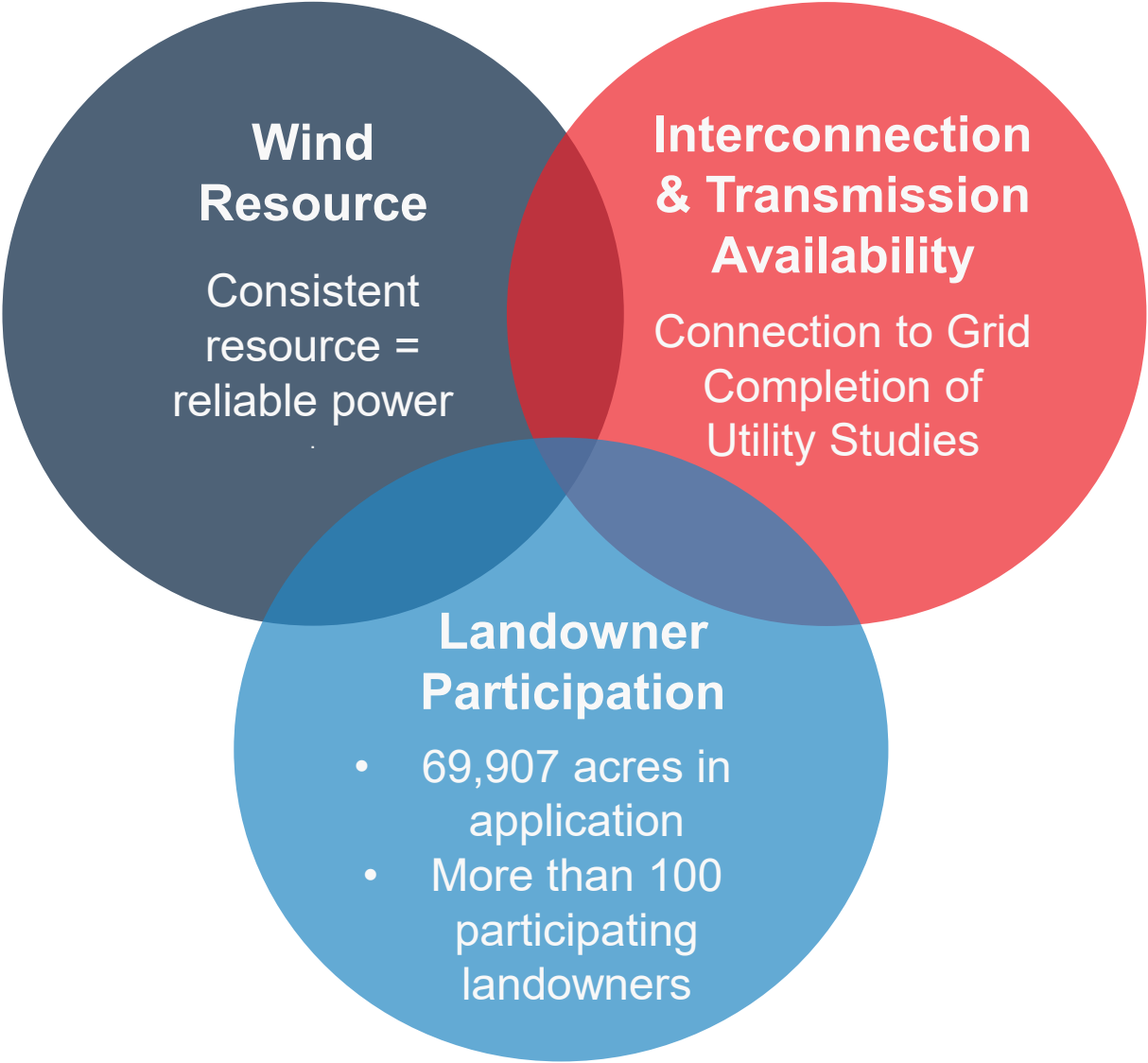
**Avg Wind on Site @  
104m:**

Class 1 Wind Regime  
8.6 – 9.0 m/s (19 – 20 mph)





# Development Progress: 3 Pillars of a Successful Wind Farm



# Development Progress: Foundational Diligence and Jurisdictional Consultation

## Foundational Diligence

- Land Use & Site Analysis
- Hydrology & Wetlands Considerations
- Species-specific Surveys
- Geological & Cultural Studies
- Microwave / Telecomm / Communication Links Analysis and Avoidance

## Jurisdictional Consultation / Permitting

- US Fish and Wildlife (USFW)
- Federal Aviation Administration (FAA)
- Colorado Department of Transportation
- & Colorado Parks & Wildlife (CPW)
- NE Colorado Health Department
- Sedgwick County
- And others

# Development Progress: Engineering

## Site Design

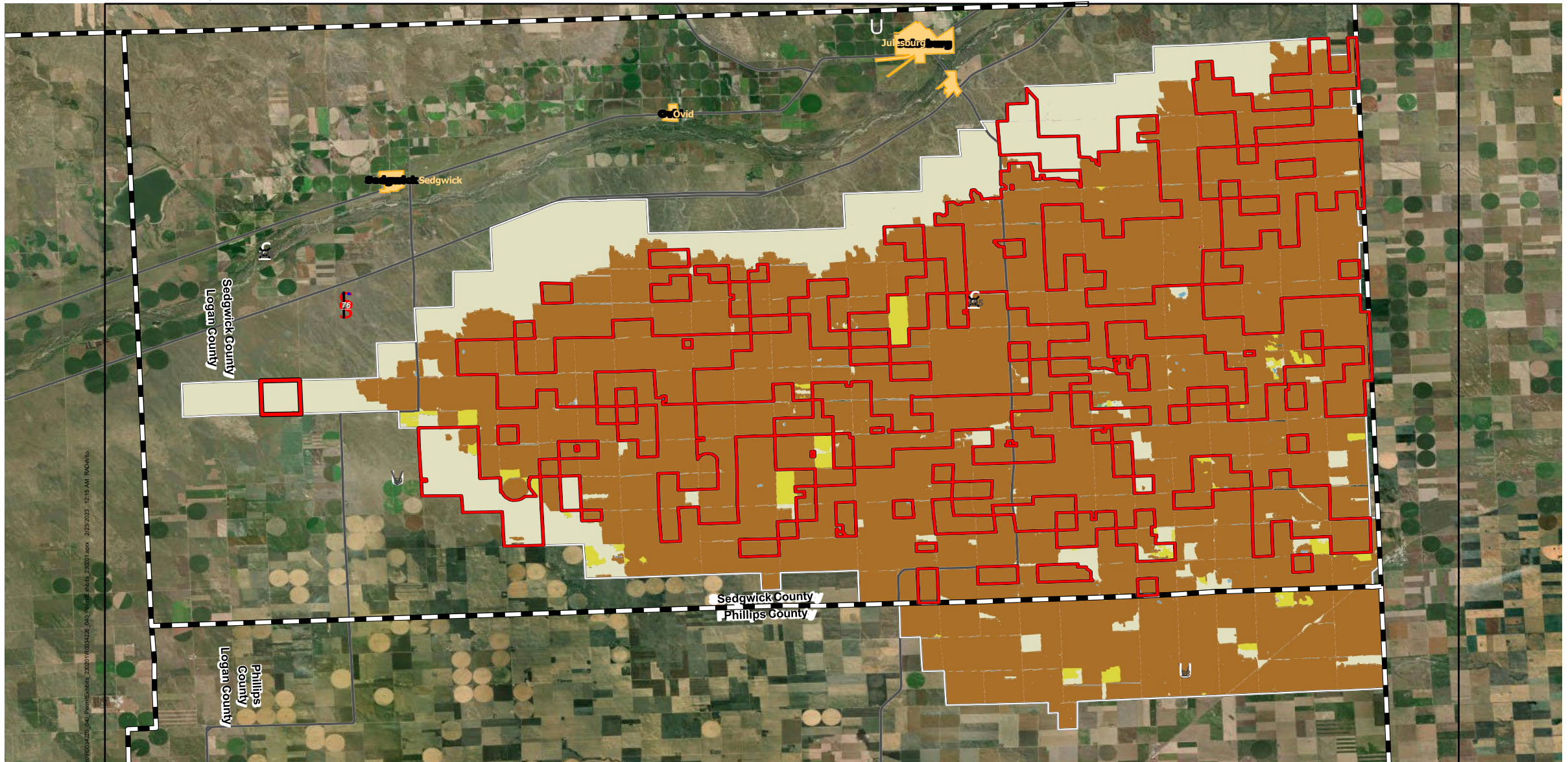
- Continuing setback analysis & buildable area analysis
- Iterative processes
- Preliminary design in permit application has 182 turbine locations

## Production Modeling

- Continuing comparative analysis of turbine technology
- Overall Park Production efficiency – among the best in Country

# Development Progress: Offtake, Procurement & Construction

- Marketing to Energy Buyers
- Equipment Contracts
- Construction Contracts



Map Document: N:\002425\00\_GIS\_ArcPro\10030225\_00\_Plan\10030225\_00\_Land\_Cover.mxd; 2/27/2023 12:19:44 PM P:\002425

Data Source(s): Westwood (2023), ESRI WMS World Imagery & World Streets Basemaps (Accessed 2023), NLCD (2019).



Toll Free (888) 937-5150 westwoodps.com  
Westwood Professional Services, Inc.

**Legend**

- |                    |                           |                             |                              |                |
|--------------------|---------------------------|-----------------------------|------------------------------|----------------|
| Site Boundary      | Barren land               | Developed, Low Intensity    | Emergent Herbaceous Wetlands | Pasture/Hay    |
| Project Boundary   | Cultivated Crops          | Developed, Medium Intensity | Grassland/Herbaceous         | Shrub/Scrub    |
| County Boundary    | Deciduous Forest          | Developed, Open Space       | Mixed Forest                 | Woody Wetlands |
| Municipal Boundary | Developed, High Intensity | Open Water                  | Major Road                   |                |

**Overland Pass Energy East Wind Project**

750MW Proposed Site Capacity  
Sedwick County, Colorado

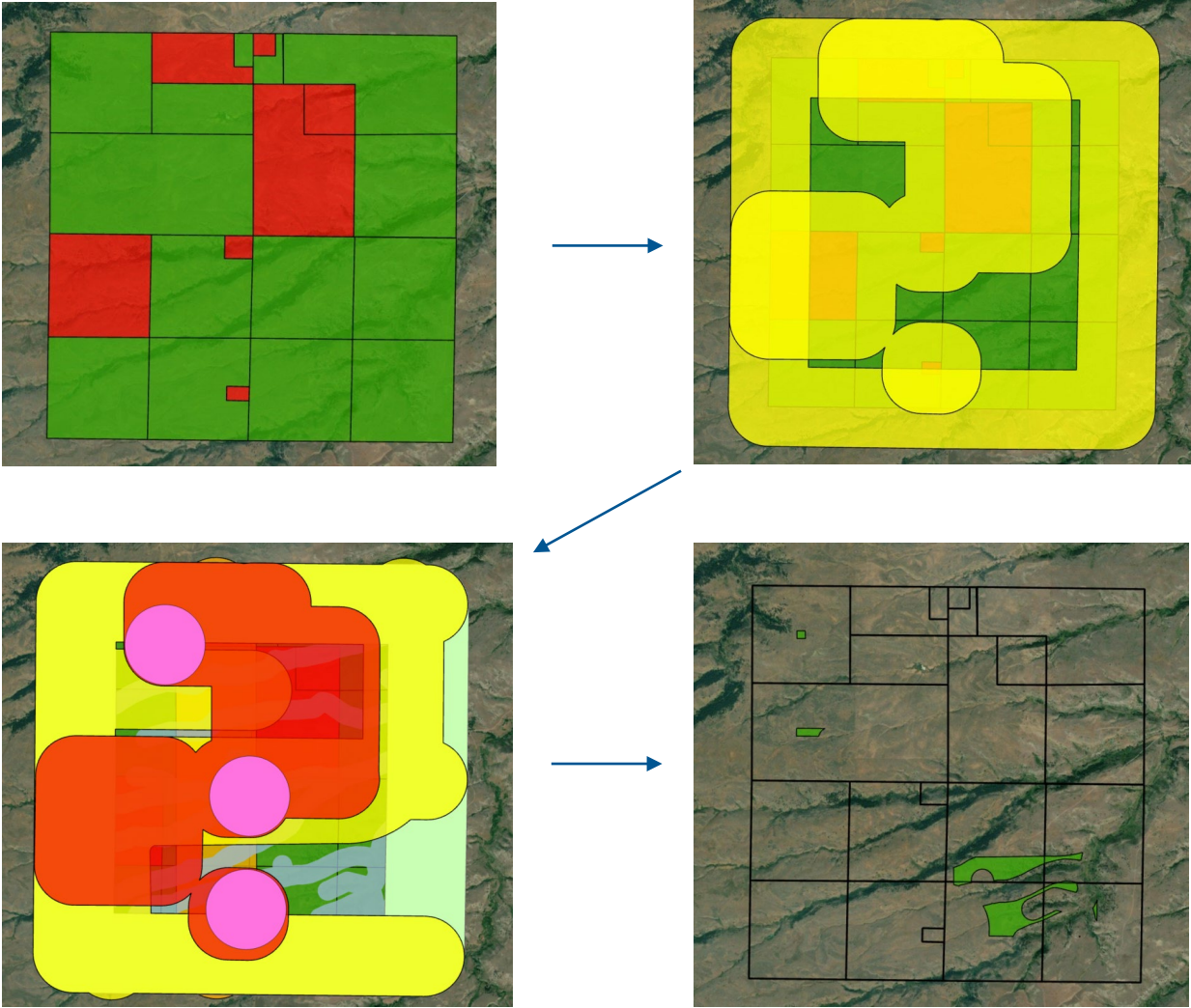


Land Cover

# Components of the Wind Facility

- Wind Generating Turbines
- Underground: Electric lines & communication lines
- Collector substations, transformers & above ground electrical infrastructure
- Operations Building(s)
- Internal Access Roads
- Light Mitigation Technology, such as ADLS radar system
- Meteorological Infrastructure
- Crane Pads (temporary / permanent)
- Temporary Construction Areas
  - Road improvements, staging areas, crane paths, and laydown yards

# Setback Analysis & Siting



(general example of setbacks)

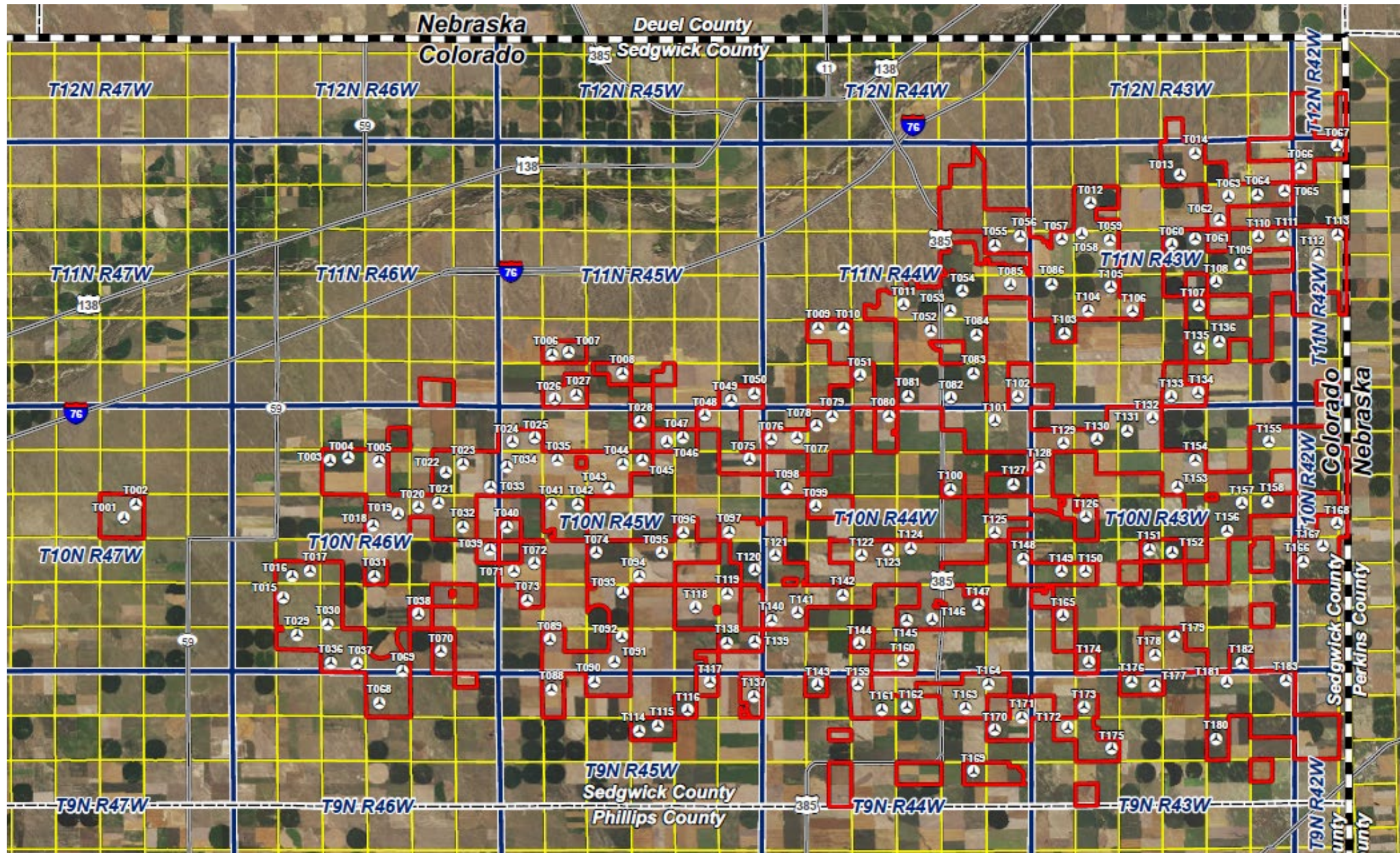


# Proposal for Reduction of Setback

	Sedgwick County “Minimum Setback” per Section 13-105.C3	Applicant’s Reduction of Setback Request	Logan County Wind Regulations (5/2/2023)	Phillips County Wind Regulations (11/18/2022)
Setback of Wind Turbine from above-ground public electric power lines or communication lines	2 times system height	1.5 times system height	1.5 Times Tip Height	1.1 times system height or 500 feet, whichever is greater
Setback of Wind Turbine from public road or highway or railroad	2 times system height	1.5 times system height	1.5 Times Tip Height	1.1 times system height or 500 feet, whichever is greater
Setback of Wind Turbine from public road or highway with ADT of 7,000 or more	2 times system height or 420 feet, whichever is greater	1.5 times system height or 420 feet, whichever is greater.	1.5 Times Tip Height	1.1 times system height or 800 feet, whichever is greater
Setback from all other property lines, unless appropriate easements are secured from adjacent property owners or other acceptable mitigation is approved by the Board	2 times system height or 1000 feet, whichever is greater.	1.5 times system height or 1000 feet, whichever is greater.	No Minimum Setback	1.1 times system height or 500 feet, whichever is greater

## Reduction of Setback Request

- Proposed reduction is within industry safety standards
- Proposed reduction does not adversely affect the public health, safety and welfare of Sedgwick County Citizens
- Nearby counties have recently decided less restrictive setbacks are appropriate.
- Improves efficiency of generating facility
  - Greater financial impact to County & landowners
  - Increases project's likelihood for success in a competitive market
- Request originated directly from project landowners (Advisory Board)
  - Unlocks potential for increased landowner participation



# Special Use Permit Application – Preliminary Site Plan

**“Location and dimensions for each Wind Turbine in the proposed Wind Energy System, to the extent known.” - Section 13-105 A. 1. c of Sedgwick County Land Use Code (Site Plan)**

**Future development steps that could change the site design and turbine locations include:**

- **Full engineering & design**
- **Land survey of property**
- **Completion of consultation with CPW and USFW**
- **Federal Aviation Administration (FAA) ongoing studies and eventual “No Hazard” determinations**
- **Full Geotechnical field studies**
- **Title Insurance and corresponding curative actions**
- **Interconnection agreement(s)**
- **Power Purchase Agreements**

**Therefore, application requests that the final locations and specifications of each wind turbine will be provided to the county prior to obtaining building permits, or ‘activity notices’, from the county.**

## Special Use Permit Application – Technology

- Preliminary Site Plan is currently based on the Vestas V163 4.5 MW 104hh turbine
- Final approval of this Special Use Permit from the Board of County Commissioners will create conditions of greater certainty for contracting and procurement from Original Equipment Manufacturers (OEM).
- Until a Turbine Supply Agreement is finalized, it's possible the project would use another turbine from another Tier 1 OEM (Vestas, GE, Nordex, Siemens).



# Special Use Permit Application – Full Engineering Design & EPC

- Final approval of the Special Use Permit will provide certainty to contract with EPC parties
- Tier 1 EPC's we work with: Wanzek, Mortenson, Blattner.

EPC → Full Design

- Erosion Control & Noxious Weed Plan
- Geohazard Report
  - Included in Special Use Permit Application (Attachment 2.11)
  - Final Geotech Report, condition of approval

## Roads / Public Improvements Agreement

- Delivery of equipment will require use of County's Roads
- Road use agreement with the approval of commissioners
- Temporary and permanent road improvements
- Our construction team will do the work
- We are committed to leaving roads in as-found, or better condition
- **Close collaboration and regular working group with Sedgwick County Road & Bridge (constant communication with site supervisor personnel)**

## Special Use Permit Application – Operations

- Operations and Maintenance facility (O&M)
- O&M building location in or near the site area will be determined before final design is complete
- Offices & facilities for 20+/- shift/periodic personnel on site
- Storage for vehicles and maintenance equipment
- Water & Wastewater standards for O&M building will be met
  - Letters of approval from Northeast Colorado Department of Health and from Colorado Division of Water Resources shall be obtained
- OSHA Compliance
- Collaboration with Local Emergency Services



# Special Use Permit Application – Decommissioning

- Draft Decommissioning Plan in Application Attachments (2.14)
- Security agreements for the costs of decommissioning
- Ongoing and various 3<sup>rd</sup> party engineering assessment(s)
- Final Decommissioning Plan is proposed as a condition of approval.

# Approval Criteria

*As demonstrated in the application materials and this presentation, the Special Use Permit is consistent with the following approval standards:*

## General Standards

- Public health, safety, welfare
- Compliance with the regulations
- Adequacy of water, wastewater, roads and access
- Service delivery capacity

# Approval Criteria

*As demonstrated in the application materials and this presentation, the Special Use Permit is consistent with the following approval standards:*

## Resource and Environmental Protection Standards

- Water quality, air quality, wildlife
- Glare, dust or noise
- Erosion and sediment control
- Drainage
- Protection of agricultural lands and important areas

# Approval Criteria

*As demonstrated in the application materials and this presentation, the Special Use Permit is consistent with the following approval standards:*

## Site and Facility Development Standards

- Site plan standards
- Ground clearance
- Safety and security
- All other use-specific standards

## Requested Conditions

- Road Use / Public Improvements Agreement
- Decommissioning Agreement
- Letters of approval for Water & Wastewater service at Operations Facility
- Provide updated final design with technology specifications & certifications.
- Definitive Interconnection study
- Full Geotechnical Report
- Reduction of Minimum Setback Request

## Ongoing and Future Development – Post Permit

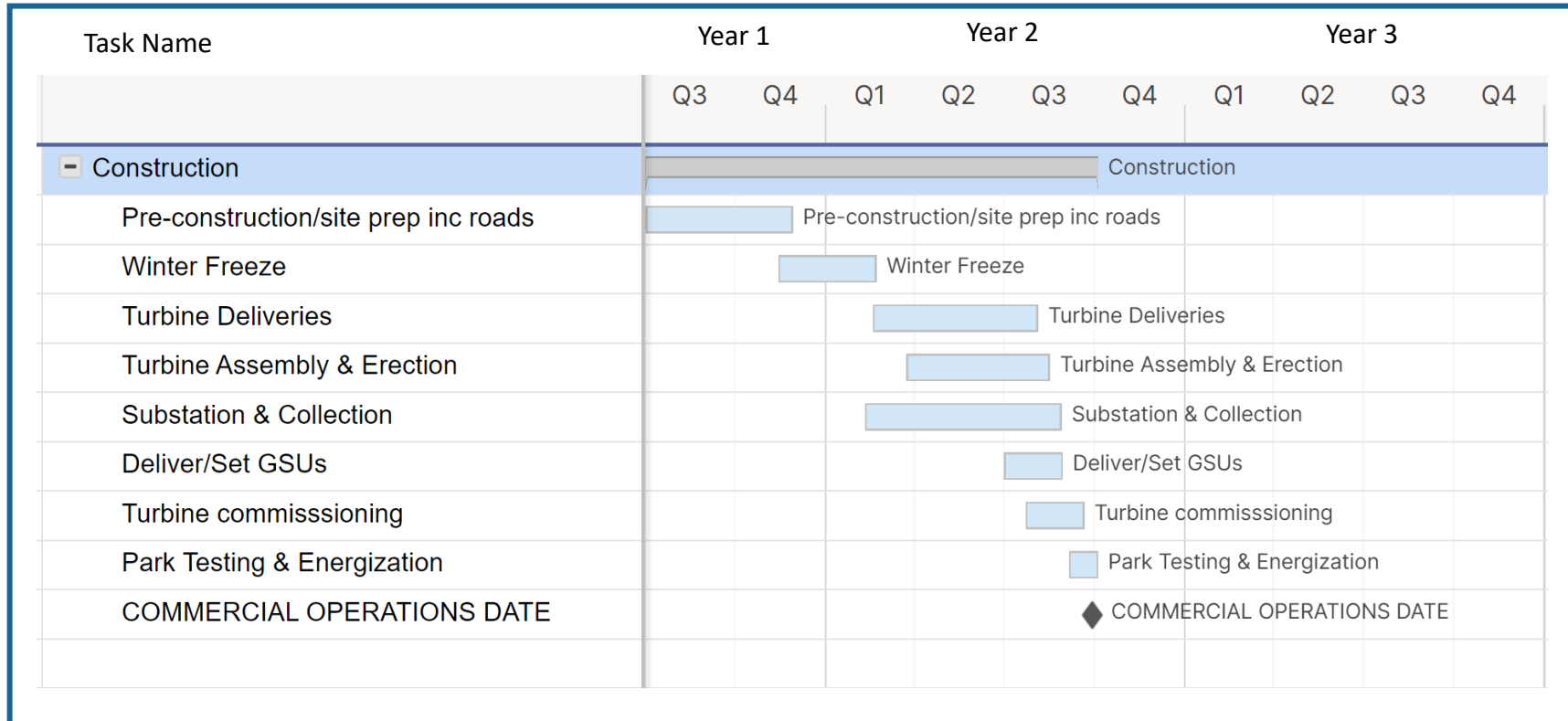
- Prudent ongoing wildlife studies will be completed in late Q3 2023
- Wetlands field study, cultural resources field study
- Land Survey
- Curative title work and coordinating Title Commitment updates
- Geotech spot bores
- FAA Hazard Determinations complete
- Full Geotech
- Final turbine micro-siting and FAA determinations complete
- Final Site Design in concert with EPC Contracting
- Interconnection Ensured
- Transmission Capacity Ensured
- Offtake Secured

## Construction: What to Expect

- Road & Bridge Use/Maintenance/Public Improvements Agreements in place prior to construction start
- Current road conditions report
- Periodic public meetings to keep community informed
- Rolling crews, turbines are not erected all at once
- Temporary “lay down yard”
- Temporary turnouts, road crossings and turning lanes
- Temporary Local Batch Plant

Construction term expected: 18 months

# Construction: Typical Project Timeline





## Construction: Avoidance and Mitigation

- Dust/weed mitigation
- Farm infrastructure avoidance
- Crop damage payments
- Temporary fencing/gates
- Potential for species setbacks
- Potential for limited work hours
- Ongoing utility locates
- Ongoing survey

# Estimated Project Benefits

## Energy Generation

- Once operating, the Overland Pass East Wind project will power 200-300k households
- For comparison, there are 1344 households in Sedgwick County

## Direct Investment: \$1.2 billion

## Job Creation

- EPC contractor is required to host regular local job fairs
- Hire local whenever possible
- 117 new jobs during construction for Sedgwick County
- 1,997 new jobs during construction for the State of Colorado
- 20.4 new long-term jobs for Sedgwick County
- 195.2 new long-term jobs for the State of Colorado

Source: David G. Loomis, "Economic Impact Analysis for the Overland Pass Energy East Wind Project," *Strategic Economic Research, LLC*.

Note: Economic Impact Report figures are based off a "800 MW" project

# Estimated Project Benefits

## Earnings

- Over \$9.5 million in new earnings during construction for Sedgwick County
- Over \$191 million in new earnings during construction for the State of Colorado
- Over \$912 thousand in new long-term earnings for Sedgwick County annually
- Over \$15.8 million in new long-term earnings for the State of Colorado annually

## Taxes

- Over \$35.1 million in total school district revenue over the life of the Project
- Over \$25.3 million in total county property taxes for Sedgwick County over the estimated 30-year life of the Project
- Over \$62.3 million in property taxes in total for all taxing districts over the estimated 30-year life of the Project

Source: David G. Loomis, "Economic Impact Analysis for the Overland Pass Energy East Wind Project," *Strategic Economic Research, LLC*.

Note: Economic Impact Report figures are based off a "800 MW" project

# Thank you

