

POWERS BUTTE
ENERGY CENTER

April 2024

Community Meeting

Presented by Mitchell Taylor



Who is Savion?



Founded in 2019, Savion is a Shell Group portfolio company operating on a stand-alone basis



Headquarters in
Kansas City, MO



215+ Employees

Solar and Energy Storage
Operation/Under
Construction/Contracted

2,305 MW
18 Projects
8 States

Project Portfolio

Solar in Development

19,651 MW
89 Projects
27 States

Storage in Development

14,544 MW
80 Projects
27 States

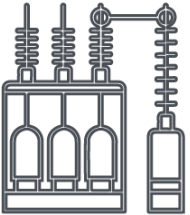
What is the Powers Butte Energy Center?



- Up to 250 MWac of solar
- Est Production: 521,935 MWh (~45,000 ID homes)



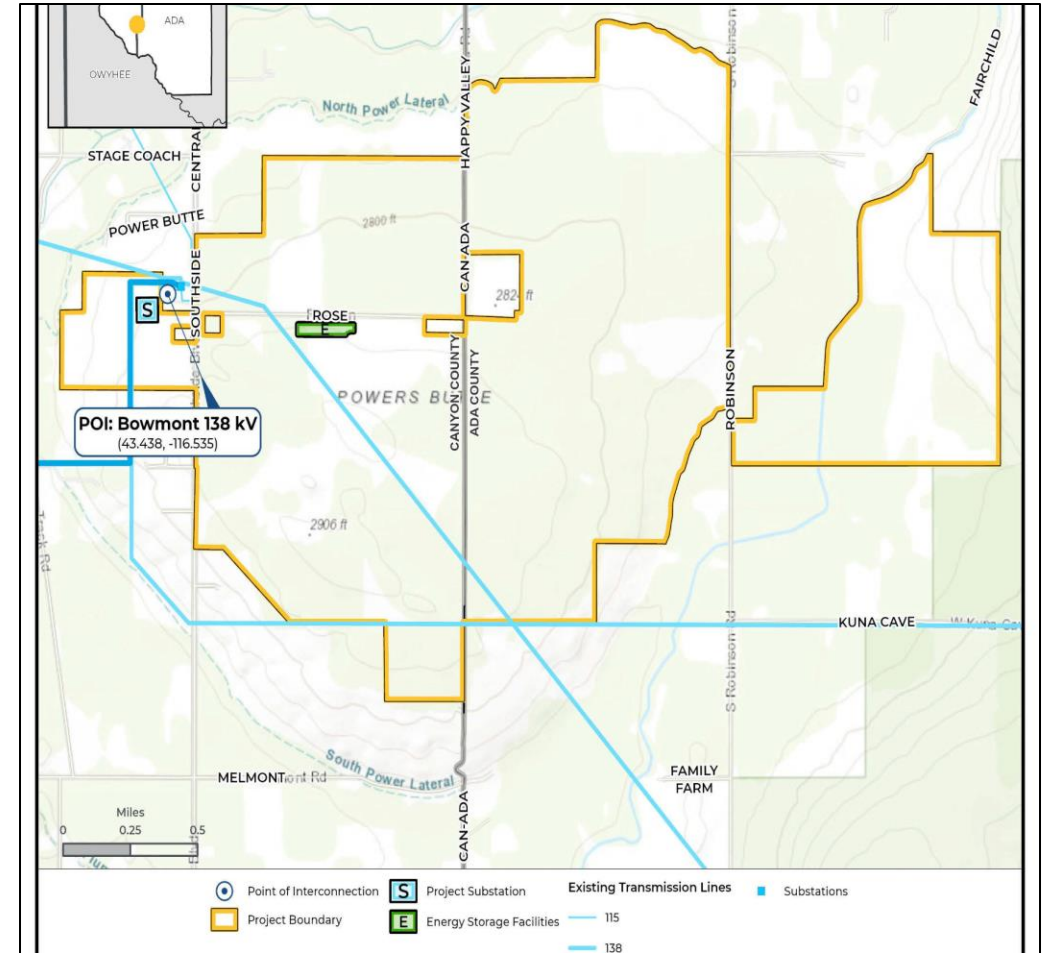
- Up to 200 MWac of battery energy storage
- 10 acres located 1/4 mile or more from any home



- Connected to Idaho Power's existing 138kV Bowmont Substation (Southside Blvd and Rose Ln)



- 2,385 acres of land is secured (purchased or purchase agreement signed)
- Of total acres, we expect a project of this size to require 1,600-1,800 acres



Canyon and Ada County
Earliest Construction Start: Early 2025
Earliest Operations Date: Summer 2026

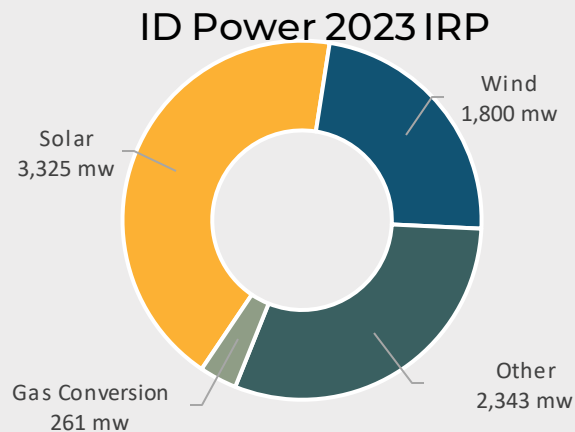
Why is a solar project proposed here?



Idaho Power needs new generation to reliably serve customers

As Idaho grows, so do local energy needs. To serve community growth, Idaho Power needs to acquire 1,425 MW of new generation between 2026 and 2028.

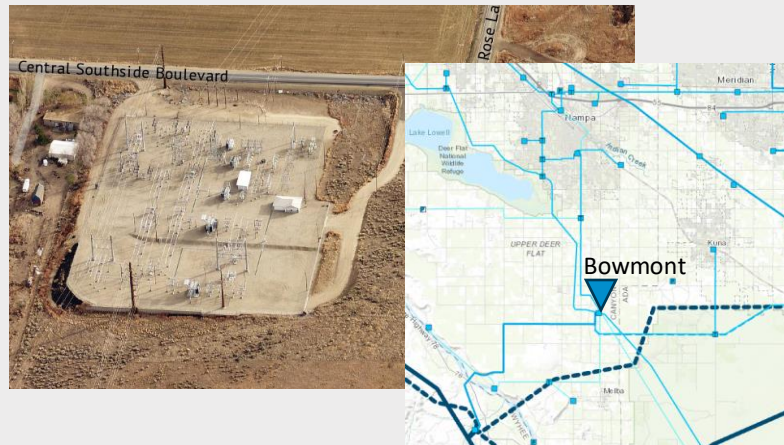
Idaho Power is obligated to acquire the lowest cost resources to keep rates low.



Bowmont Substation is an inexpensive place to interconnect

The Bowmont substation and surrounding transmission lines provide a cost-effective location to interconnect new generation.

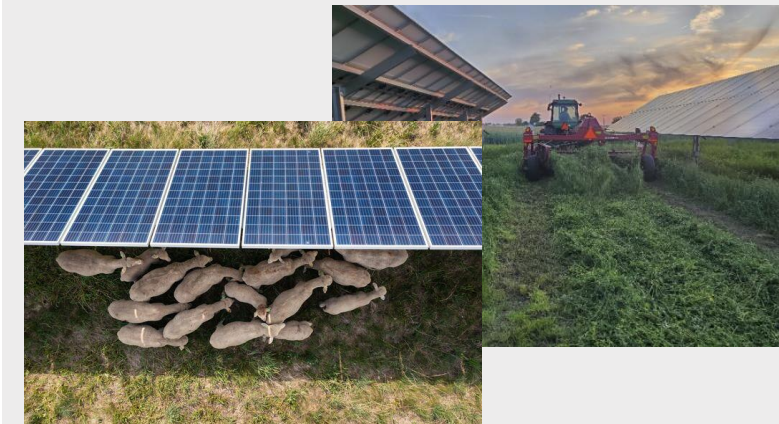
Low cost to interconnect contributes to a lower energy cost benefiting Idaho Power customers.



Local landowners are willing to sell property to the project

Projects like this can only move forward if property owners are willing to sell or lease their land.

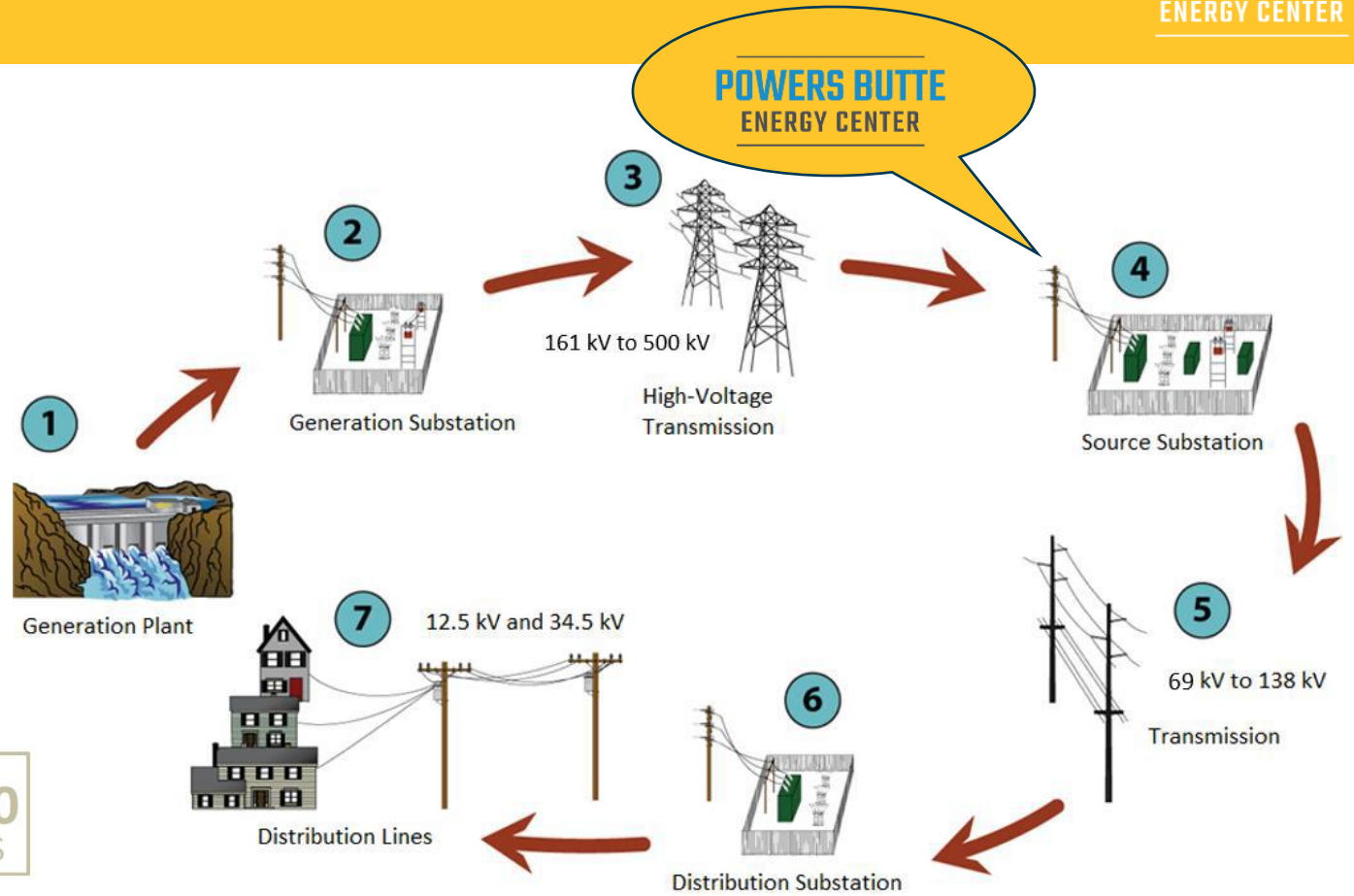
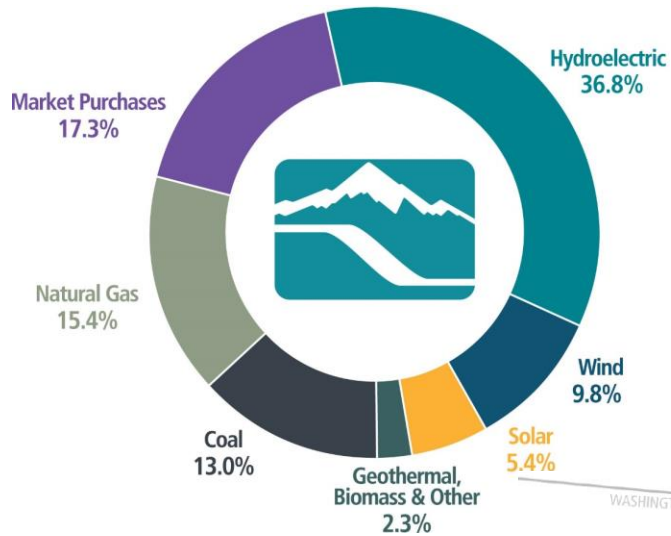
We appreciate the rich agriculture heritage in the community and believe we can preserve the prioritization of farming through dual use solar and grazing/agriculture.



Idaho Power's System

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Idaho Power's
Energy Mix Today



POWERS BUTTE
ENERGY CENTER



We are **COMMITTED TO AFFORDABILITY**
and working hard to keep our prices
20-30% BELOW
the national average.



What would it look like?

1) Installing perimeter fence



2) Drilling and pounding posts



3) Installing racking



4) Mounting the panels



5) Operating a solar project



6) Farming or grazing on site



What we've done



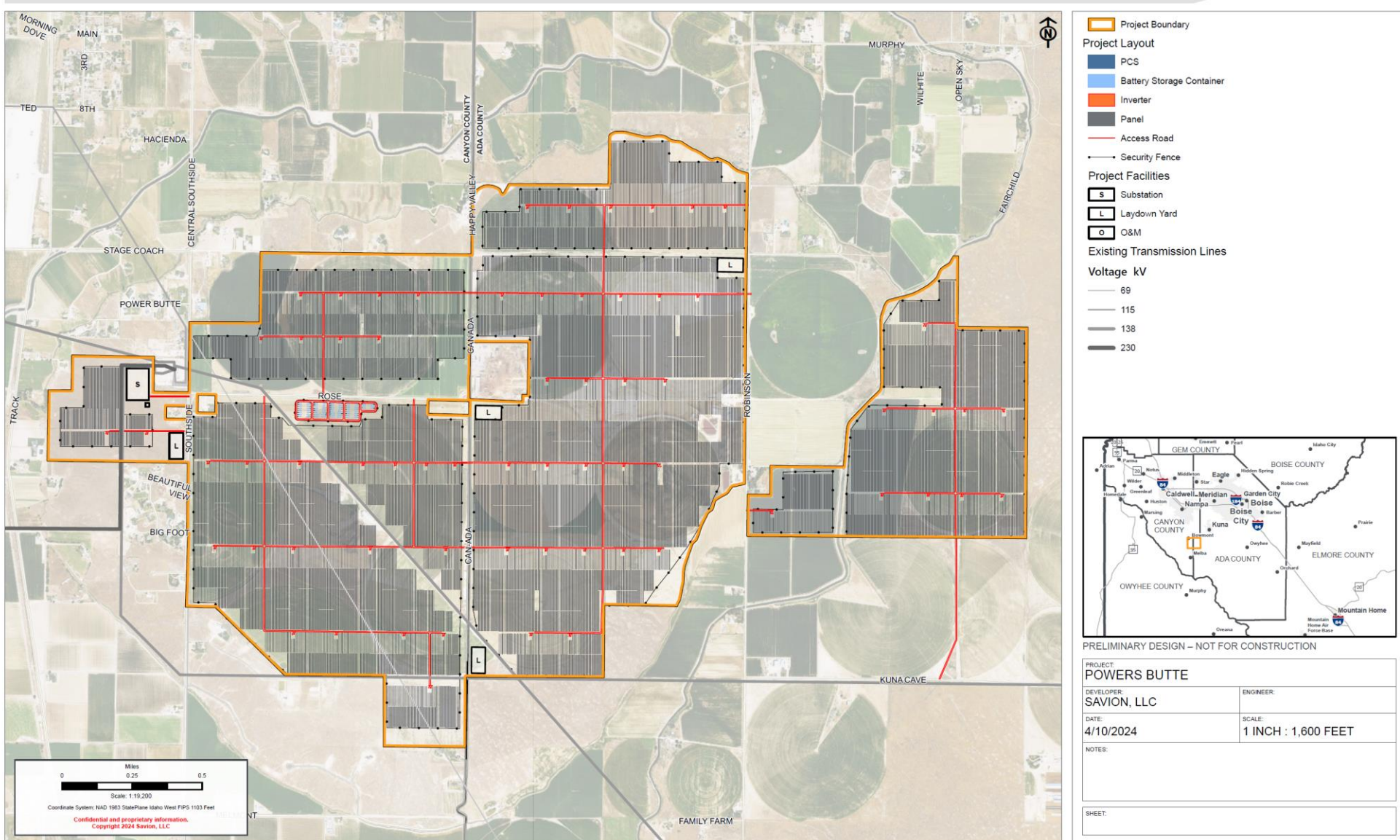
Discussions with as many members of the community and neighbors to the project as possible

- Environmental Site Assessment (Phase I)
- Federally Regulated Species Review
- Biological Habitat Assessment
- Wetland Delineation
- Geotechnical Investigation
- Cultural Resource Review
- Hydrology and Hydraulics Study
- Energy Forecast
- Erosion Control Plan
- Sound Study

Additional community outreach
(organizations, County services, community programs, events)

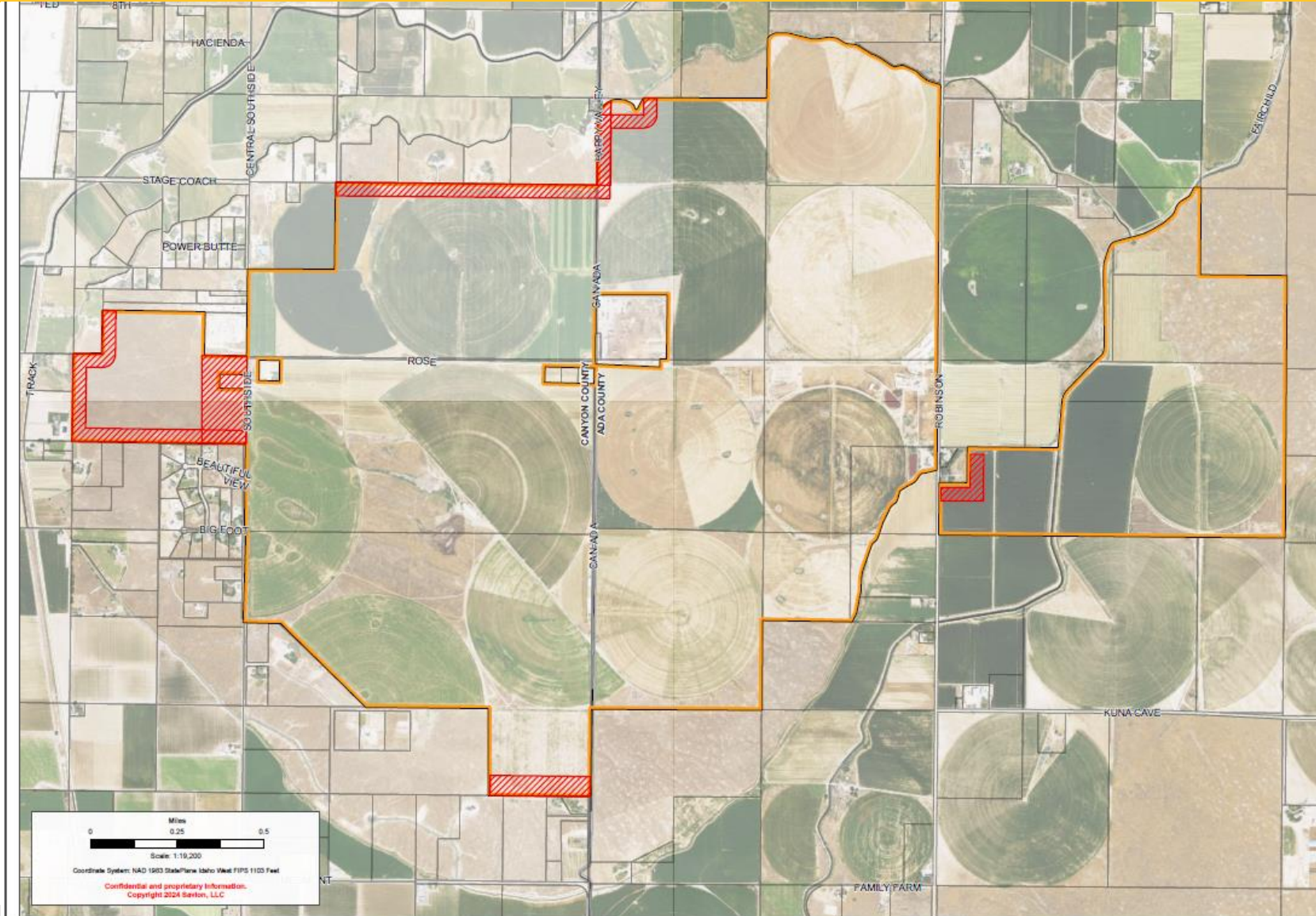
Identified partners interested in grazing or farming the
site when operational

Where it would be



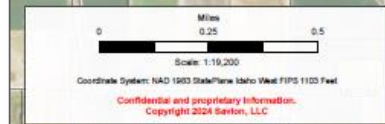
The following companies and organizations provided data that contributed to the production of this map - CoreLogic, Inc., Environmental Systems Research Institute (ESRI), ReGrid, Loveland Technologies, U.S. Department of Agriculture (USDA), U.S. Federal Aviation Administration (FAA), U.S. Geological Survey (USGS), WhiteStar Corporation, Verityx, Inc., An ABB Company, Imagery © 2024 Hexagon and data partners

How far it is from neighbors



PRELIMINARY DESIGN – NOT FOR CONSTRUCTION

PROJECT POWERS BUTTE	
DEVELOPER: SAVION, LLC	ENGINEER:
DATE: 4/10/2024	SCALE: 1 INCH : 1,600 FEET
NOTES:	
SHEET:	



Is it loud? No, almost silent

Daytime



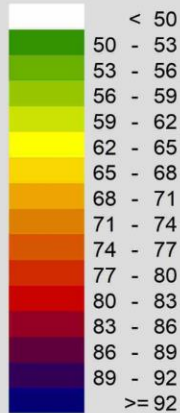
Powers Butte Energy Center

Noise Map - Day

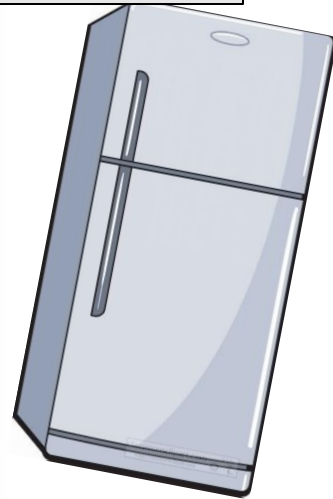
Anything not shaded in green would be quieter than a home refrigerator

Signs and symbols

Levels in dB(A)



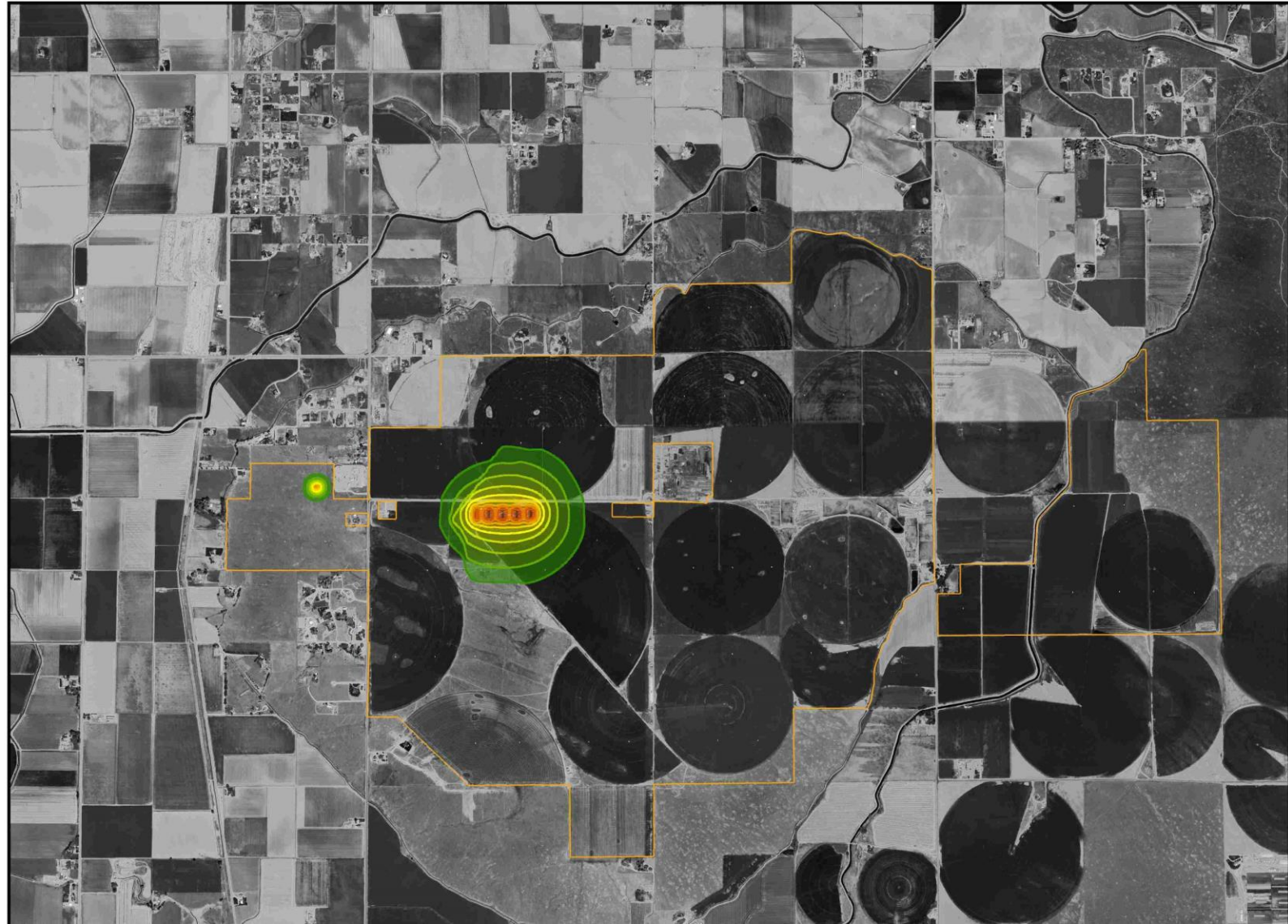
1 : 35000



Is it loud? No, almost silent

Nighttime

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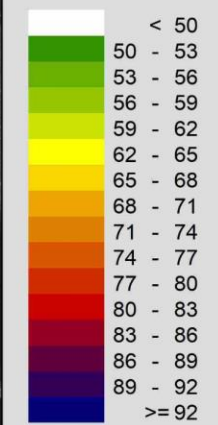
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Noise Map - Night

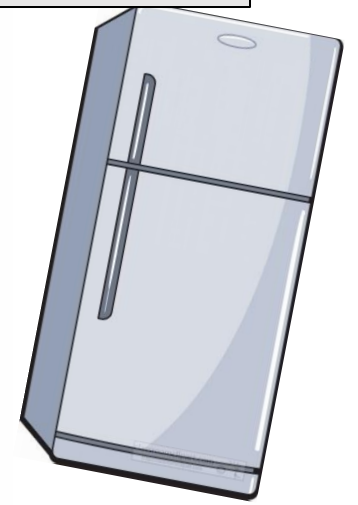
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Signs and symbols

Levels in dB(A)



1 : 35000



Is solar dangerous?



Hazardous? No

- 75% of solar panels is glass, the remainder is aluminum, tin, copper and semiconductor.
- The semiconductor does **not** contain sufficient hazardous material to pose a danger to the environment or human health
- All materials in a solar panel are insoluble and non-volatile at ambient conditions, don't mix with water or vaporize into air, and enclosed.



EMF? No

- Non-ionizing EMFs come from radio waves, cell phones, microwaves, and other everyday home appliances.
- EMFs are highest around electric equipment such as inverters but even there **they do not exceed that of an electric can opener.**
- There is **no** significant EMF outside the border of a solar project.



Heat? No

- PV panels are off the ground with vegetation underneath and constant airflow throughout. Heat dissipates very rapidly (unlikely with rooftops, concrete, or asphalt)
- Heat collected has been shown to be **undetectable** 100 feet away from panels



Glare? No

- PV solar panels are designed to absorb solar energy and convert it into electricity, so they are designed with the specific intention to prevent light from reflecting as much as possible.
- The Earth's surface reflects an average of 29% of incoming solar radiation, solar panels reflect only about 2% of incoming light



Soil Damage? No

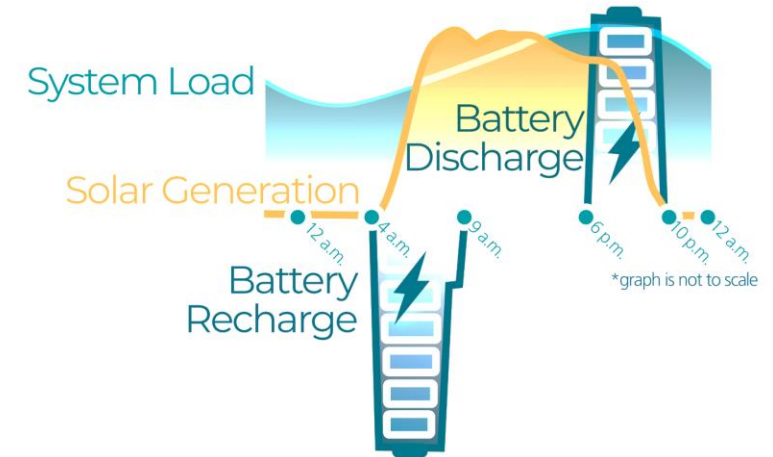
- Improved soil health through perennial vegetation and therefore **increased** nitrogen retention
- Reduced nutrient runoff and **less** fertilizer requirements
- Reduced erosion and **improved** water retention compared to ag (95% lower erosion, 9.5% higher water retention)
- Reduced pesticide use therefore **less** chemicals or hazardous materials in the soil
- Reduced water use through less water intensive grasses

What about the battery?

A battery fire is very rare.

Protections and response plans to mitigate potential fire risk include:

- ✓ Collaboration and input from local fire department and first responders
- ✓ Emergency Response Plans
- ✓ Pre-Installation Standards and Testing
- ✓ Temperature management and monitoring sensors
- ✓ System and Component Certification
- ✓ 24/7 monitoring



Misconceptions / Claims	Facts
Battery fire incidents is increasing	Energy storage battery fires are decreasing as a percentage of deployments
E-scooter fires have resulted in deaths—so energy storage may be more deadly	No deaths have resulted from energy storage facilities in the United States
Battery fires emit toxic fumes and pose a risk to the community	Past incidents demonstrate that fires are contained within the facility, and air quality in neighboring areas remains at safe levels



What happens in 40 years?

Solar Panels:



- Continue producing energy after 40 years; panels just don't produce as much
- Project life may be longer
- Panels can be reused elsewhere
- Panels can be recycled:
 - 75% of solar panel components are glass; remainder is aluminum, tin, copper, and semiconductor
 - Up to 95% of semiconductor material and 90% of glass used in panels can be recycled

Other Materials:



- **Steel posts:** the scrap metal value / this is usually greater than the cost to remove the entire system
- **Racking:** aluminum, tin, and steel are easily recyclable
- **Inverters, substation, wiring:** contains more valuable raw metals and likely to be reused or recycled



- **Battery:** recycling is growing to address electric vehicles and energy storage systems. Repurposing, refurbishment, and direct recycling of raw materials are all likely for the battery system

The Project:



- **Repowering:** with the interconnection in place and much of the equipment usable again.
 - Unless there is no need for power from this project in 40 years, repowering is likely



- **Decommissioning:** a plan is required in the permitting process to return land to a state similar to today
 - Permitting the project does not change the zoning of the land
 - Equipment removed
 - Soil rested / can be returned to previous use

Dual Use Solar - Agrivoltaics

Powers Butte is exploring dual use (agrivoltaics) in the operations of the project. How we do that will depend on how effectively we can irrigate the site.

Grasses, Grazing, and Pollinator Habitat:

- Local sheep grazers are already grazing under other local solar projects and are interested in working this site too
- ~2 years after the project is operational, grasses can take root and enable on site sheep or pasture-pig grazing
- The more we irrigate, the larger the flock the project can support
- Vegetation mix options include tall fescue, orchardgrass, ryegrass, white clover, birdsfoot Trefoil, and chicory



Seed, Irrigate, Harvest:

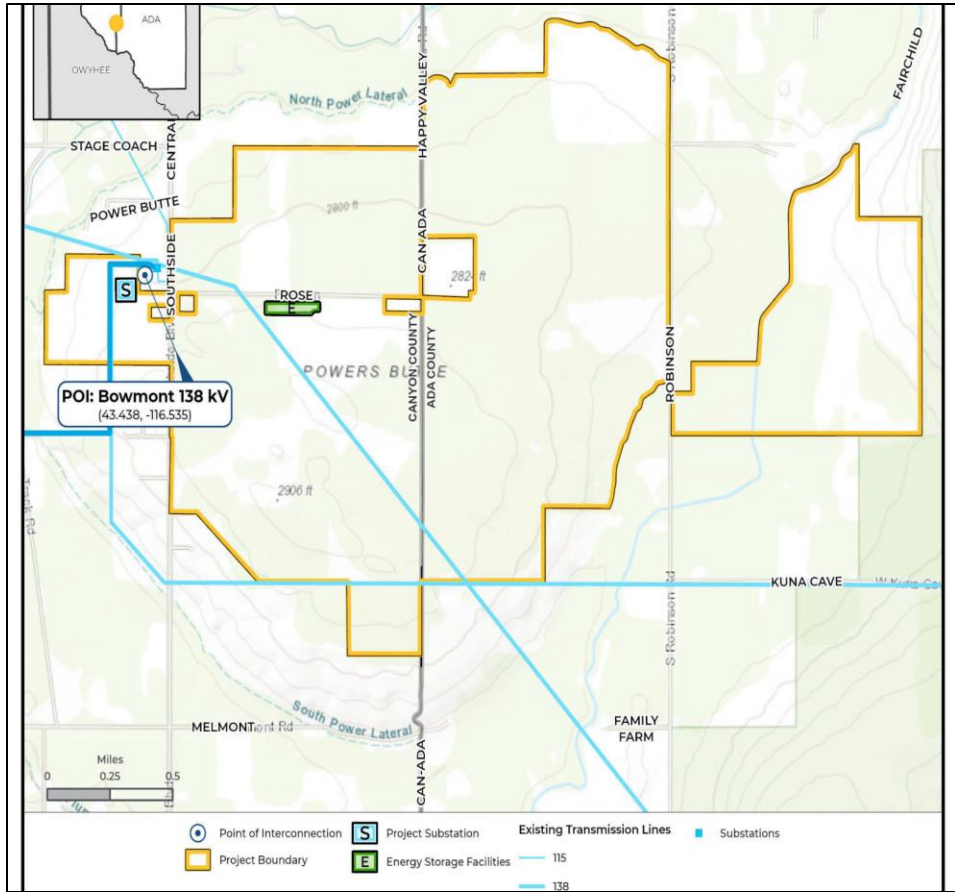
- Design considerations that enable farming between rows include:
 - a) Burying cabling
 - b) Keeping 10-17ft between each edge of the solar panels
- The more acreage we can use, the more space we can farm between rows and the bigger the equipment that can be used
- Idaho agrivoltaics will require irrigation, options we're considering include gated pipe, drip lines, and directional stops on hand lines



In any of these options, there **will** be a net reduction in water required to use this site for grazing and/or farming.

We are seeking irrigation solutions and are in discussions with the University of Idaho, Idaho National Laboratory, and College of Western Idaho. If you have ideas or want to participate in helping us address this, please let us know!

Overview



PROJECT STATISTICS

2025-2026

Start of Construction to start of Operations

\$200M+

Capital investment by developer for solar and storage projects

45,200

Estimated ID homes powered

Up to 2,385

Project area acres

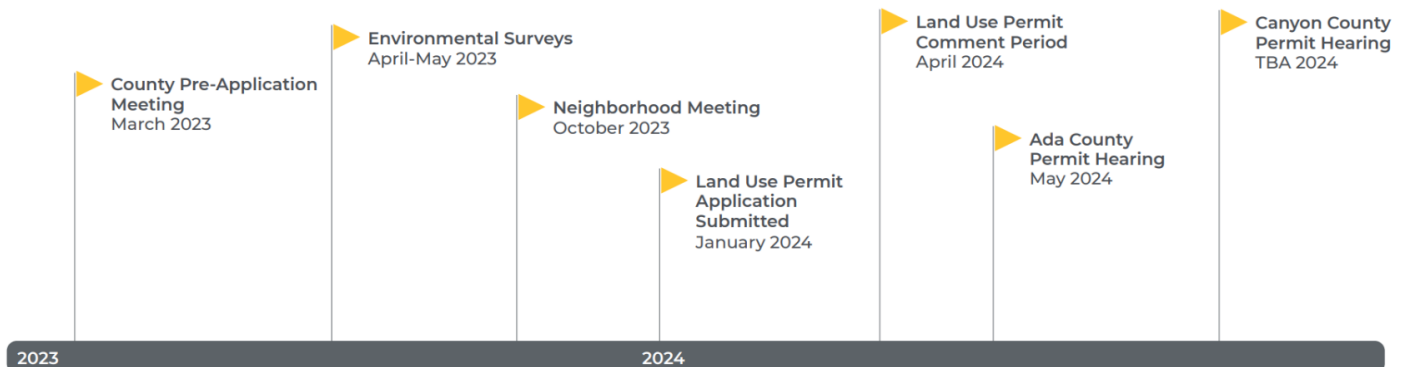
~300-350

Estimated new jobs for Ada County and Idaho during construction

40+

Estimated years of operation

PROJECT PERMITTING TIMELINE



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QUESTIONS?

THANK YOU

More information on Powers Butte is available online at:
www.powersbutteenergycenter.com
www.facebook.com/PowersButteEnergyCenter

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