

Dahlia Solar Project



COCHISE COUNTY BOARD OF
SUPERVISORS MEETING

OCTOBER 29, 2024



Introductions

Horus Energy – Georgi Velkov, Roger
Freeman and Mark Prichard

Westland Resources – Diana Sandoval,
M.A. and Joel Diamond, PhD



HORUS ENERGY



Horus Energy

WHO WE ARE:

Horus Energy is a longstanding, fully integrated renewable energy company headquartered in London, with a local presence in New York, Calgary, and Texas.

PROJECT PIPELINE:

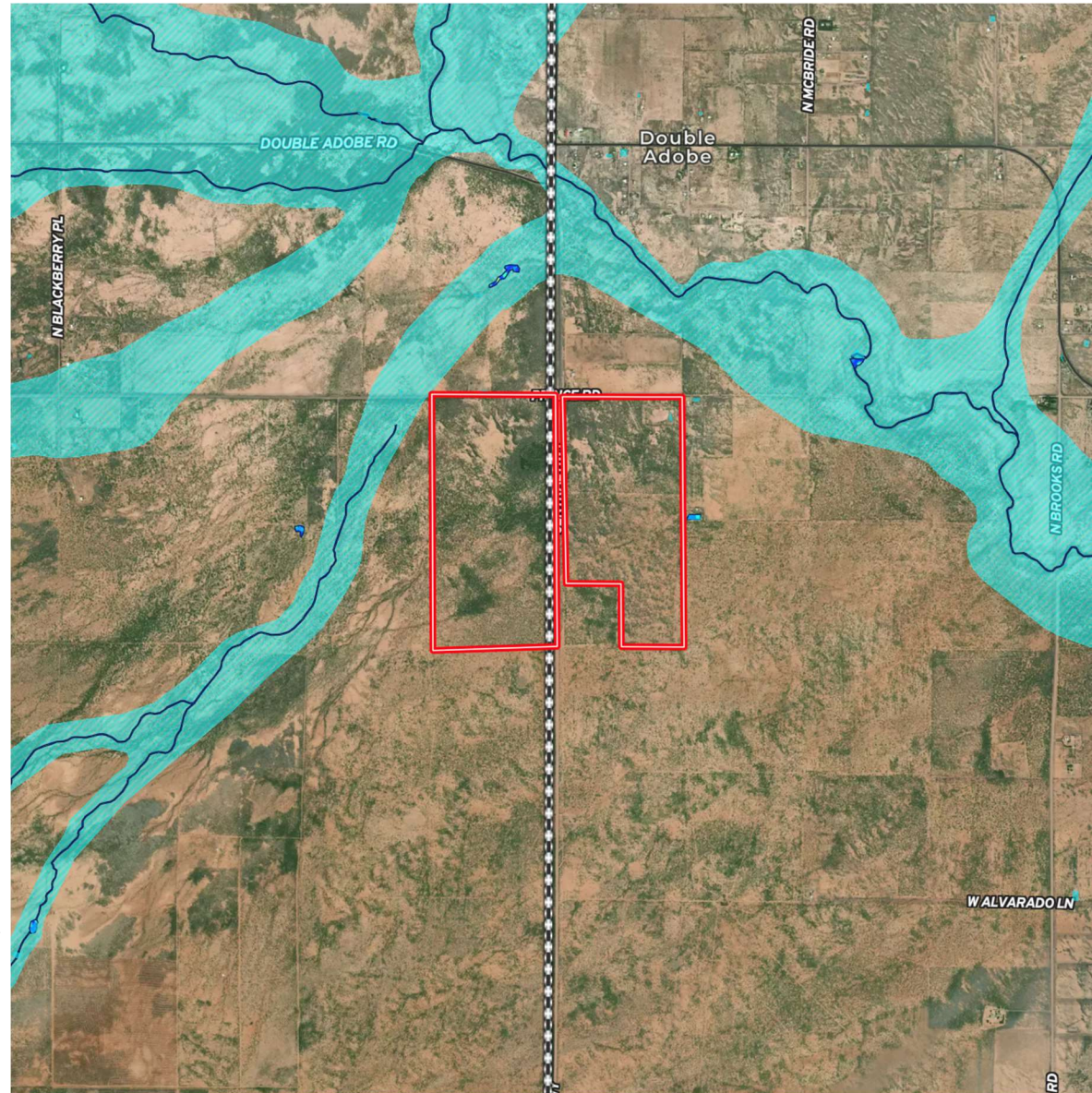
Horus has a pipeline of projects under development totaling more than 4,500 MW across a number of markets.

- US Markets with Horus projects:
 - Texas – Duffy Solar; Erin Solar; Percy Solar, Oak Volt BESS, Brela BESS, Invictus BESS
 - Colorado – Prospect & Janus Solar; Sandy Hill Solar; Sand Dune Solar
 - Louisiana – Sulphur Solar
 - Arizona – Dahlia Solar



Project Overview

- Maximum of 75 MW AC solar project proposed on 596 acres of private land
- Working closely with utility companies to secure an agreement that best meets local power needs
- Dahlia does NOT include a battery component (BESS)
- Horus is exploring options for agrivoltaics including sheep grazing for Dahlia
- Site Selection Criteria:
 - Existing transmission lines with available capacity
 - Available private land with suitable site topography
 - Avoiding critical wildlife habitat and floodplains
 - Sufficient space to provide wildlife corridor and additional setback for neighbors, well beyond County requirements
 - Existing road access





Project Benefits

- Tax revenue: \$18 million property tax over 30 years and \$0.75 million for 2 years from sales tax
- Job creation: construction c. 520 and operation c. 26
- Promotes energy independence for Cochise County
- Solar generation uses FAR LESS water than natural gas and coal generation – c. 20 gallons per MW
- Supports local businesses (local supplier for construction and money spent during construction and operation)
- Provides clean, renewable power improving reliability that helps attract economic development



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Project Compatibility

- Visual Impact
- Agrivoltaics
- Emergency Response Plan/
Natural Disasters
- Construction Noise
- Energy Sale and Use
- Funding/Grants
- Light Pollution
- Flooding
- Soil sampling
- Wildlife
- Avian Impact & Aviation
- Mirror Effect/Reflectivity
- Vegetation Management
- Decommissioning
- BESS Safety





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Finding out more information



www.dahliasolar.com

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Diana Sandoval

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APPENDICES

Public Engagement

- Newsletter about the project and open house invitation mailed to neighbors and stakeholders on March 5, 2024 in Spanish and English
- Open house held on March 21, 2024 for project's neighbors and attended by representatives from numerous organizations
- Project website is available with FAQs, contact information
- Responses to agency and public comments
- Ongoing communication with a number of neighbors, addressing concerns raised





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Wildlife and Habitat Preservation

Dahlia Solar Project will incorporate:

- Panel anti-reflective glare technology and rack spacing
- Large wildlife corridors/open space preservation providing additional setbacks and vegetative buffer where natural vegetation is present allowing large animals to travel around the site
- Wildlife-friendly fencing developed in coordination with AGFD that allows small wildlife to travel through the site
- Preservation of ephemeral ponding areas where wildlife may already utilize water sources within the project boundary
- Implement pre-construction bird/small mammal surveys and commitment to exclusion areas if nesting birds are detected
- Trench inspection and escape ramps for small animals during construction
- Increase native plant biodiversity through the long-term land management

APPENDIX 2





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APPENDIX 3

Concerns Raised	Project Compliance
Visual Impact	Neighbours have raised concerns regarding Project impacts on the rural character of the area and on residents' use and enjoyment of their property. Unlike fossil fuel plants or industrial facilities, solar installations do not produce air, water or soil emissions. The panels will not exceed 8-10ft high at maximum tilt. Horus has also committed to minimal disturbance of existing vegetation, especially around the buffer areas with neighbours which will further reduce impact. Dahlia would be a passive land use and would be less impactful than a new residential subdivision, shopping center, or large-scale commercial agricultural facilities. Dahlia will also explore with neighbours, additional visual mitigation options once the final design has been confirmed.
Construction Noise	While the overall construction timeframe for Dahlia is estimated at between 12 and 18 months, most of the work during that timeframe is mounting panels onto the racking system and connecting them to the inverters. The most noise intensive part of the construction is the pile driving, which on average takes up to 8 weeks.
Energy Sale and Use	Concerns have been raised about where the generated power will be sold and used (locally or will it go out of County or out of State). Energy produced at this scale, will be consumed locally as moving it far away leads to substantial losses and is extremely expensive and inefficient. Horus has engaged with local utilities and is in constant contact regarding offtake, however we cannot have a more substantial or definitive agreement prior securing permits and interconnection.
Battery Energy Storage System (BESS)	Fears have been voiced around battery facilities and their safety, this application does not include a battery element and the project plan does not envisage one to be included for Dahlia Solar.



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APPENDIX 4

Concerns Raised	Project Compliance
Emergency Response Plan (ERP)	Planning and Zoning Commission has asked about the depth of the ERP. Horus has consulted with the local emergency management director and provided a preliminary ERP. We will continue to engage with them as well as other emergency responders and fire departments as we get closer to construction and continue enhancing our ERP. One of Planning and Zoning Commission members noted FEMA ranks counties for natural disasters and their ability to address emergencies. The ERP will address each potential event. The project will be fully insured to cover any such events.
Flooding	The property is outside mapped floodplain; however, we will carry out hydrological study and prepare a stormwater management plan which will be submitted to the County for approval with a building permit.
Funding / Grants	The public has voiced concerns about public funding for Dahlia Solar. There is no public funding for this project. The projects are inherently profitable because once constructed the O&M cost is negligible. There is the IRA which incentivizes construction by providing tax incentives, but these are based on the investment in the project construction cost and are not public funding in any sense.
Soil sampling	Neighbors have requested soil sampling on an annual basis before and after construction. Horus can agree to sample for metals before construction and the first 5 years of operation on an annual basis, if the samples do not show change, monitoring can stop.
Impact on Wildlife	Solar generation is a passive use and wildlife is expected to adapt to changes in the landscape, especially with the use of wildlife corridors and wildlife friendly fencing. Nonetheless, environmental preservation is important to Horus and they have made several commitments to optimize the project. See Appendix 2 for more information.



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APPENDIX 5

Concerns Raised	Project Compliance
Impact on Birds	The Planning and Zoning Commission has asked about the likelihood of adverse effects of solar farm on birds and risk of birds diving onto solar farm. To reduce the risk of lake-like effect of the solar farm, Horus has worked with Arizona Game and Fish to determine the minimum distance required between rows and has incorporated that guidance into the current design.
Natural Disasters	One of Planning and Zoning Commission members have quoted a number of natural disasters that can occur in Cochise County and asked for those to be incorporated into the Emergency Response Plan. Appropriate responses will be incorporated. Additionally, the project's insurance will be sufficient to cover said events.
Vegetation Management	Horus has committed to minimal grading (mainly for substation and internal maintenance roads) and maintain vegetation under control through strategic mowing.
Light Pollution	There be minimal lighting on site, mainly around the substation and strategically around the perimeter , all lights will be focused inside the property and will be hooded, as well as be equipped with motion sensors as to avoid constant lighting.
Mirror Effect/Aviation	A neighbor has raised concerns of a potential mirror effect from the solar farm. The panels included in the design of Dahlia Solar include antireflective coating and are being used widely across the industry and in very close proximity to airports and have proven no reflective effect.
Removal of Solar Equipment/ Decommissioning	Question has been raised about the clean up of the site and it's use after the life of the solar farm. Horus has committed responsible energy production and will include a bond for assurances related to removal of all equipment from the properties and restoring the habitat over time. This is also part of the lease agreement with the landowner (west parcel).

APPENDIX 6

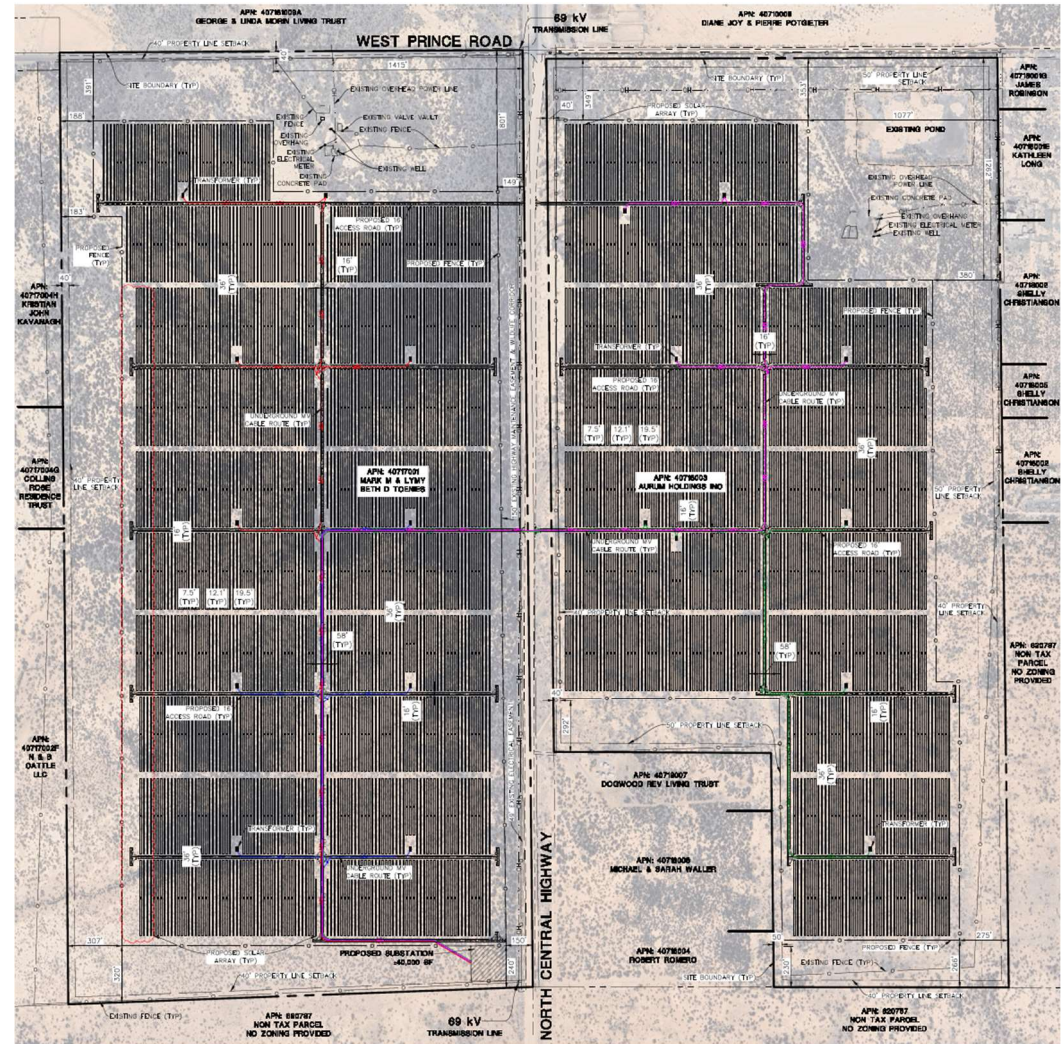
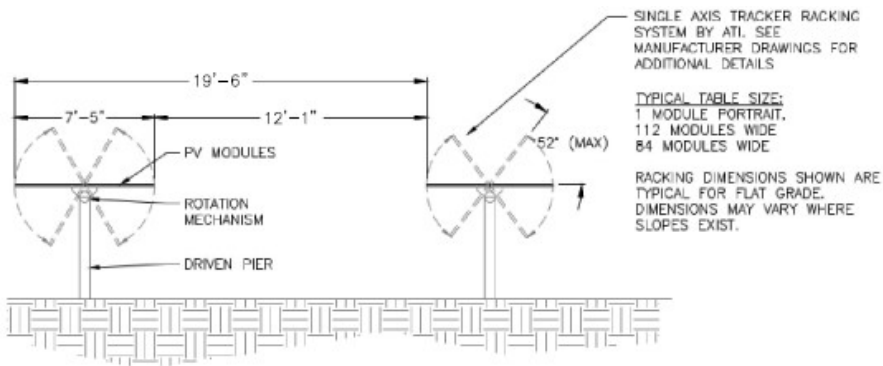
Health and Safety Impacts of Photovoltaics

- It is natural for neighbors near solar developments to be concerned about health and safety impacts. We'd like to address unnecessary fears:
 - Solar PV technology does not result in emissions or contamination to the air, water, or soil. Concerns of public health and safety are evaluated in a study completed by N.C. State University (2017). In this published study, the negative health and safety impacts of utility scale PV development were shown to be negligible.
 - Solar PV panels typically consist of glass, polymer, aluminum, copper, and semiconductor materials that can be recovered and recycled at the end of their useful life.
 - The Project will use crystalline silicon panels. Crystalline silicon panels represent approximately 90% of solar panels in use and research has shown they “do not pose a material risk or toxicity to public health and safety.”
 - Cochise County requires a Decommissioning Plan to be submitted prior to a building permit application for new Solar Energy Power Plants and it requires financial assurances. The costs are updated by a licensed professional engineer and updated at no more than five-year intervals by the owner/operator adjusted for inflation.

APPENDIX 7

Preliminary Project Design

- There will be circa 225 acres of panels on total of 596 acres of land. Approximately 400 acres will be fenced.
- The ground coverage ratio for the arrays is approximately 38% with distance from edge to edge between panels at 12 feet 1 inch (AGFD recommended 12ft+)
- The distance from the panels to nearest residence is approximately 400 feet, most are further
- Compliance with all development standards
- Estimated height of panels at maximum tilt will be c. 8ft, reducing visual impact for neighbors and passersby



APPENDIX 8



Health and Safety of Solar Farms

- Solar Farms are safe. We'd like to address unnecessary fears:
 - Solar technology does not result in emissions or contamination to the air, water, or soil. Concerns of public health and safety are evaluated in a study completed by N.C. State University (2017). In this published study, the negative health and safety impacts of utility scale PV development were shown to be negligible.
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