

MLRP - Solar Farms



Date: April 17, 2024

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Expectations:

- Commercial Solar: Use cases and future (NEM2 dead?)
- Community Solar: What is it and where is it at
- Utility Solar: Could this be a viable option



Agenda

- Commercial Solar- what works today
- Community Solar- what is the latest information
- Utility Scale Solar- what is an ideal circumstance



Commercial Solar

- Commercial Solar: Individually owned solar for the purpose of offsetting / lowering business costs of energy
- Changes in the Public Utility Tariff
 - Aggregation and Net metering to Export
- Larger users and less seasonal are still good use case
 - Dairy Barn, Large HP pumps, year-round usage

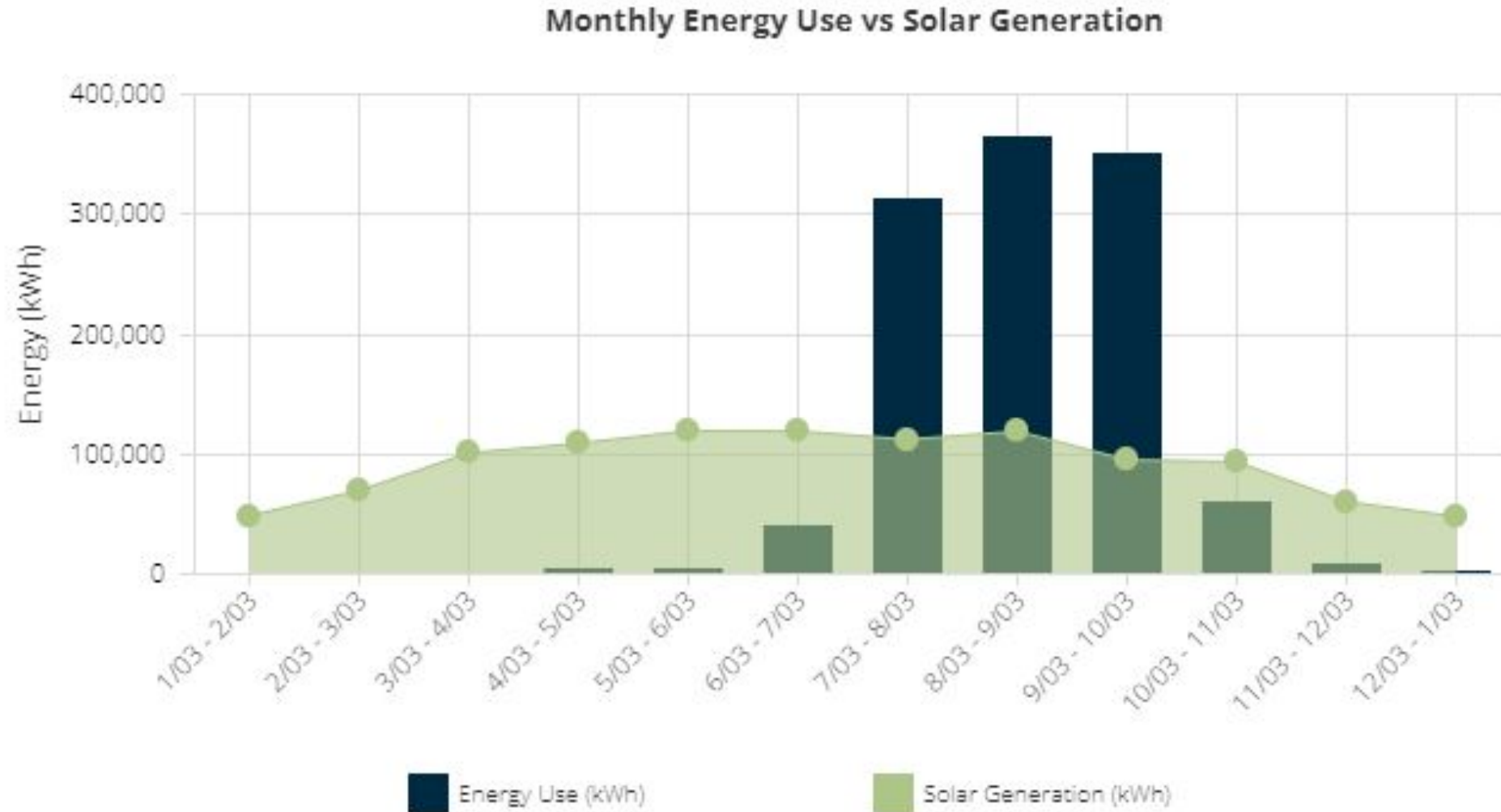


Ideal energy Profile

Monthly Energy Use vs Solar Generation



Less than Ideal energy Profile



Future of Commercial Solar

- Applications submitted are grandfathered into original rates
- New Solar:
 - ROI: 3-6 years
 - Acreage: 2.5-5
- Ag: Large Wells and Barns
- Commercial: Case by case

Reach out to a solar expert to see if your situation works, since the changes are new

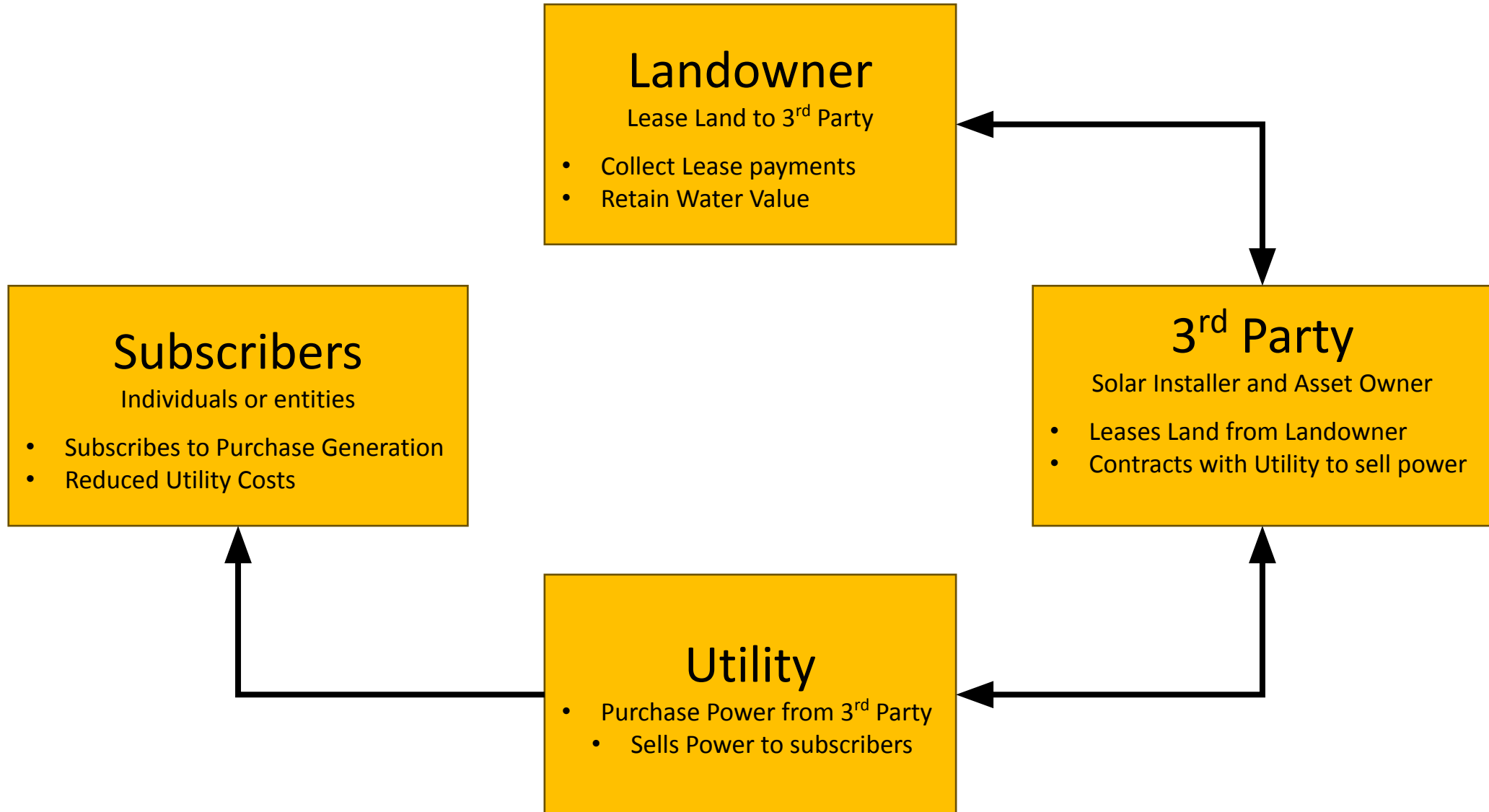


Community Solar

- A solar project which benefits multiple subscribers by sourcing power from an off-site array. Typically, generation costs are lower than traditionally sourced power.
- Benefits to Landowner: Land is leased to a 3rd party who owns and installs the solar array.



Community Solar: Gains



Community Solar Specifications

- Proximity to 12 KV lines
- 25-30 Acres: Utilities want **up to** 5 MW AC along with Battery
- Development Time: 1-3 Years
- Lease Value: \$2500 – \$3500 per acre per year – Utility dependent
- Term: typically, 20-30 years



Future Community Solar

- On Hold
 - CPUC sides with Utilities against Bill, indicating that it violates federal law.
 - Proposes are being made to alter the existing community-solar program.
- Alternate programs are being reviewed to determine if paths forward, outside of community solar can be explored.

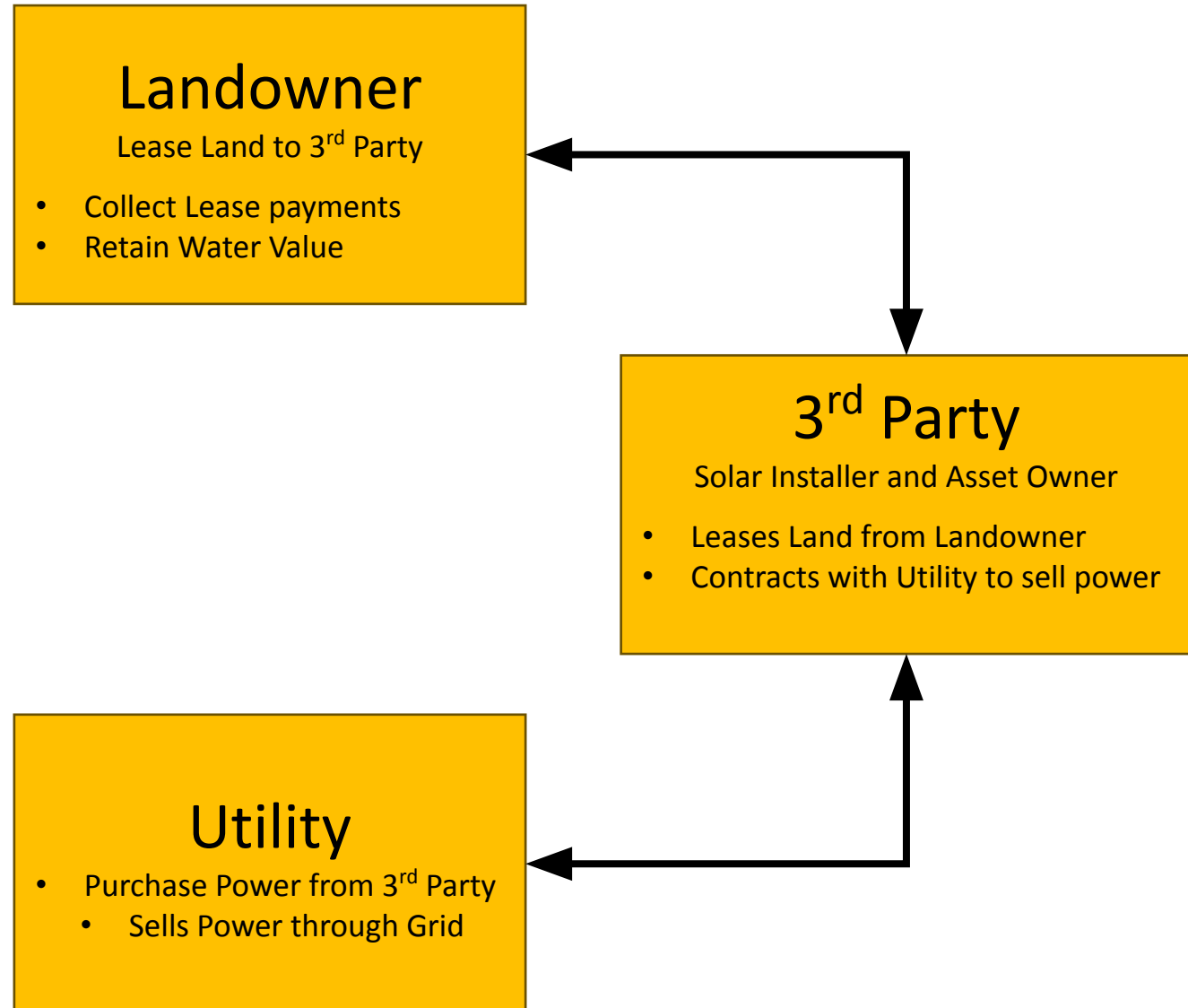


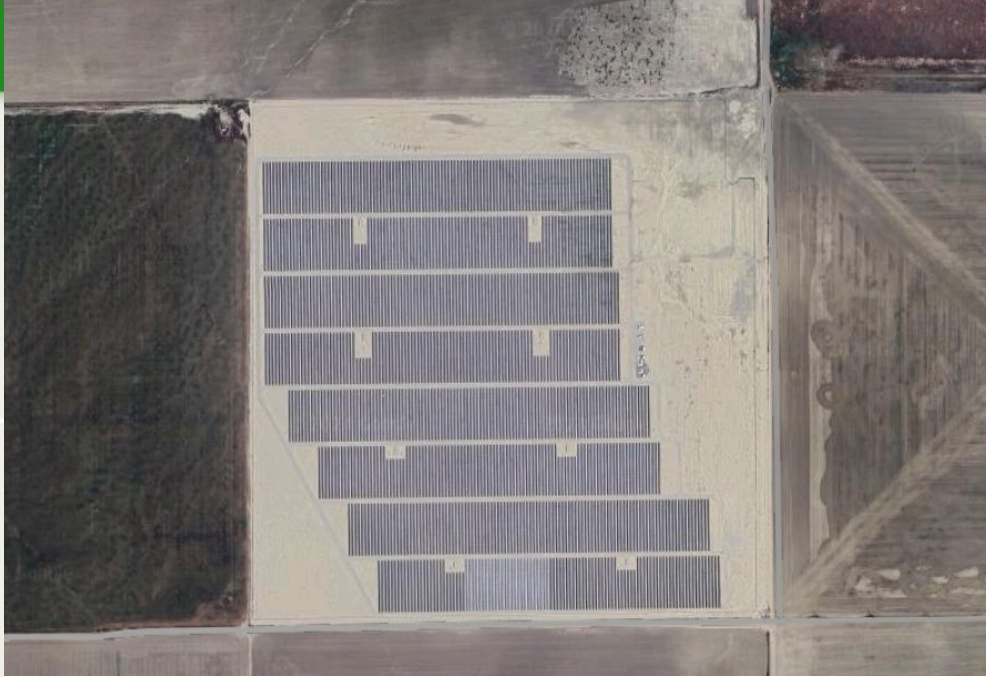
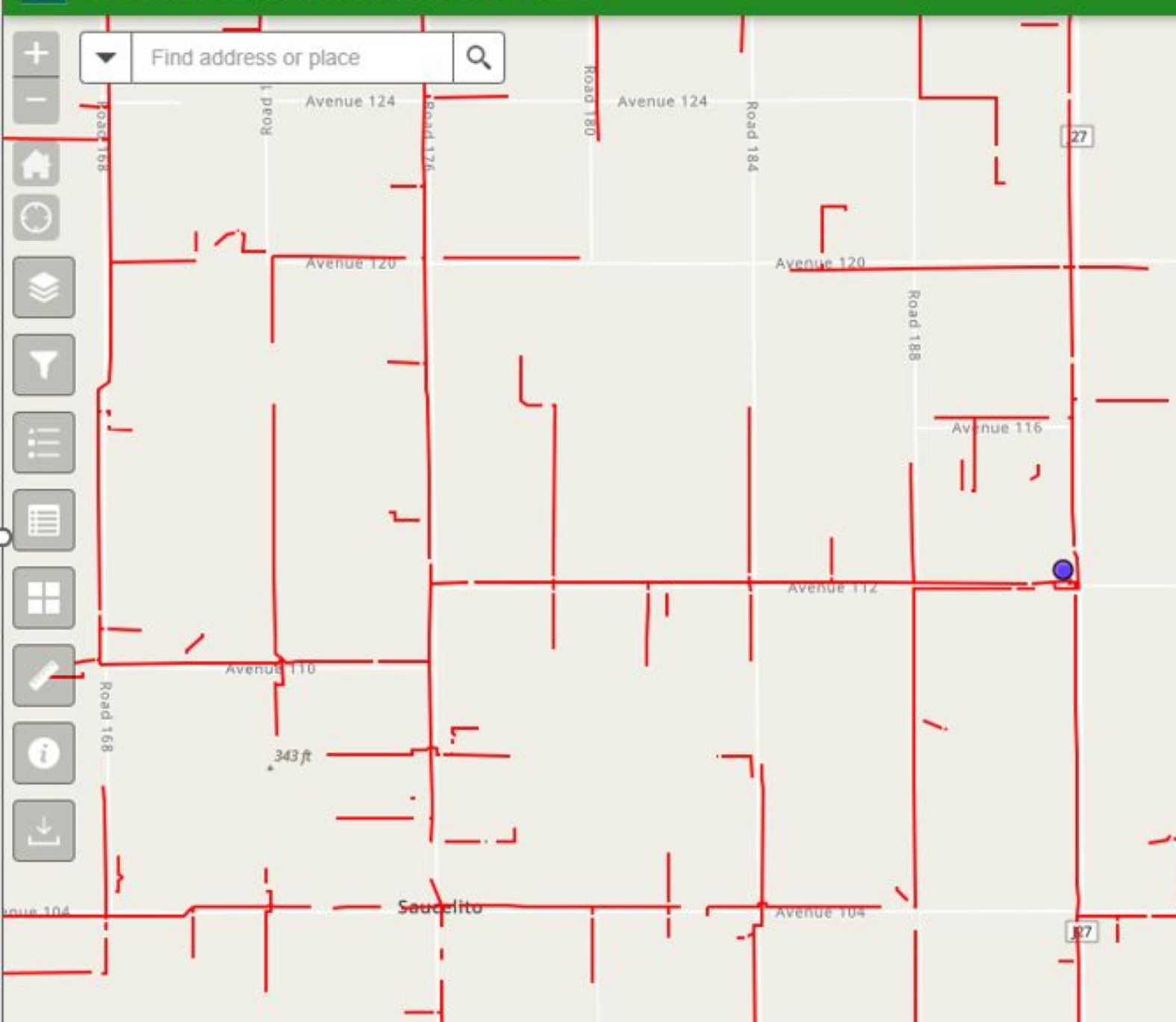
Utility Scale Solar

- Large scale solar installations, typically interconnected at higher voltage, whose purpose is to deliver power to the Utility in geographic locations.
- Benefits to Landowner: Land is leased to a 3rd party who owns and installs the solar array.



Utility Scale Solar: Gains





(1 of 1)

Substations

Information

Substation Name	Poplar
Substation Id	581
Substation Type	D -- Distribution
System Name	Vestal 220/66 System

Existing Generation (MW)	21.6
Queued Generation (MW)	16.04
Total Generation (MW)	37.64
Projected Load	23.4
Penetration Level	160.6
Maximum Remaining Generation Capacity (MW)	14.53

Utility Scale Solar Specifications

- Proximity to Substation: limits cost exposure
- 100-1000 Acres: Achieve Economies of Scale
- Development Time: 2-5 Years
- Lease Value: \$750 – \$1500 per acre per year – Utility dependent
- Term: typically, 20-30 years



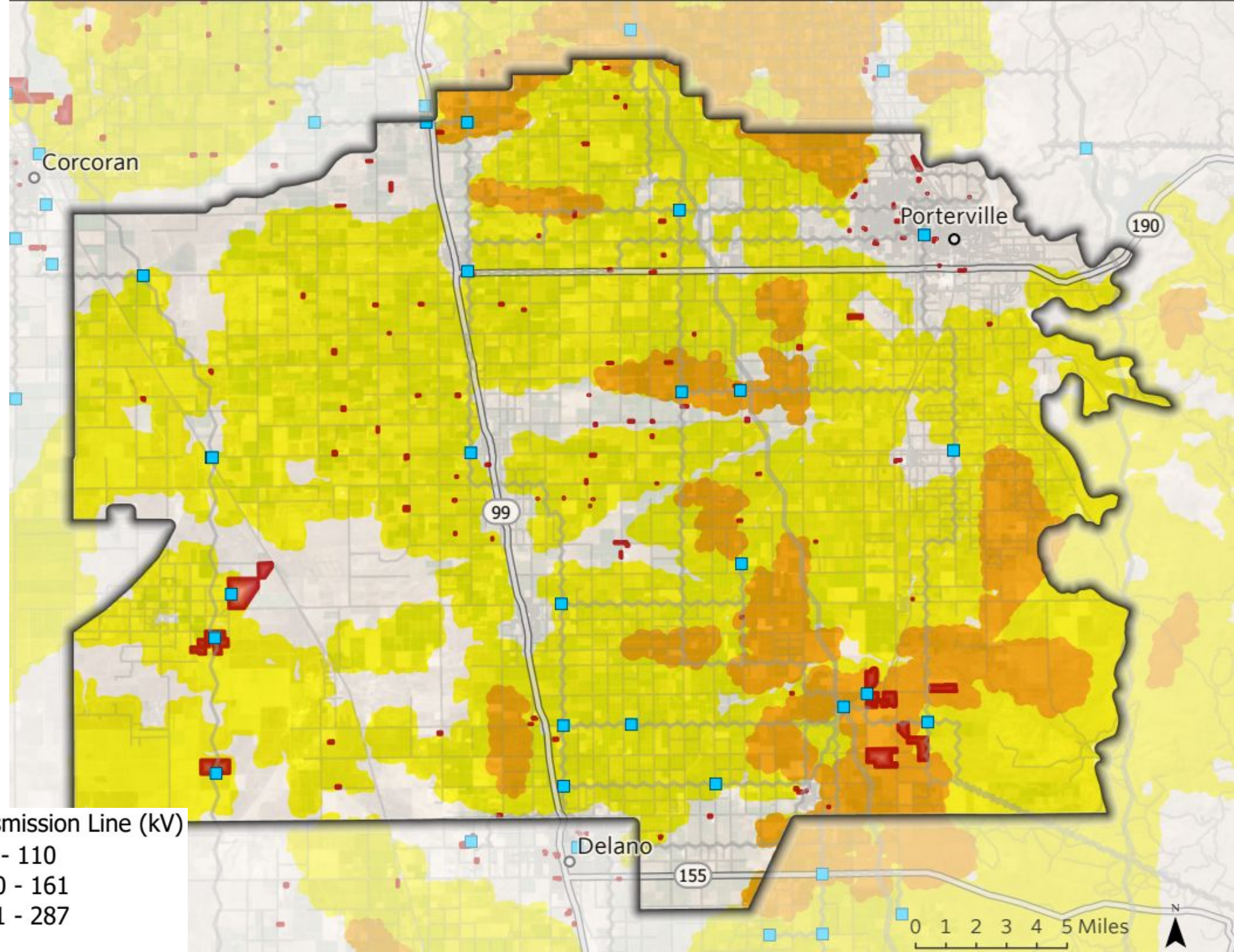
Future Utility Scale Solar

- Active opportunity within the Central Valley
- Development is extensive
- Ideal Candidate:
 - Land is owned
 - Not in flood zone
 - Typical soils (not rocky)
 - Near Substation (100+ acres)
 - Comfortable with 3+ Year Development time



Solar Map

Candidate Project Areas are identified based on their technical potential to produce wind, solar, or offshore wind, and then filtered by Exclusions at Siting Level 2 (SL2) and Siting Level 3 (SL3). From the "Power of Place - West" study, 2020. SL2 filters out lands that are unsuitable due to socio-economic factors, and SL3 removes from SL2 lands that have potential conservation values.



- Solar Candidate Project Area SL3
 - Solar Candidate Project Area SL2
 - Existing Solar Installation
 - Point of Utility Interconnection
- Transmission Line (kV)
- ~ 33 - 110
 - ~ 110 - 161
 - ~ 161 - 287

Closing

Solar could be a viable option in multiple fronts, especially when coupled with other water reducing activities

Reach out to a solar expert to determine viability of your land

