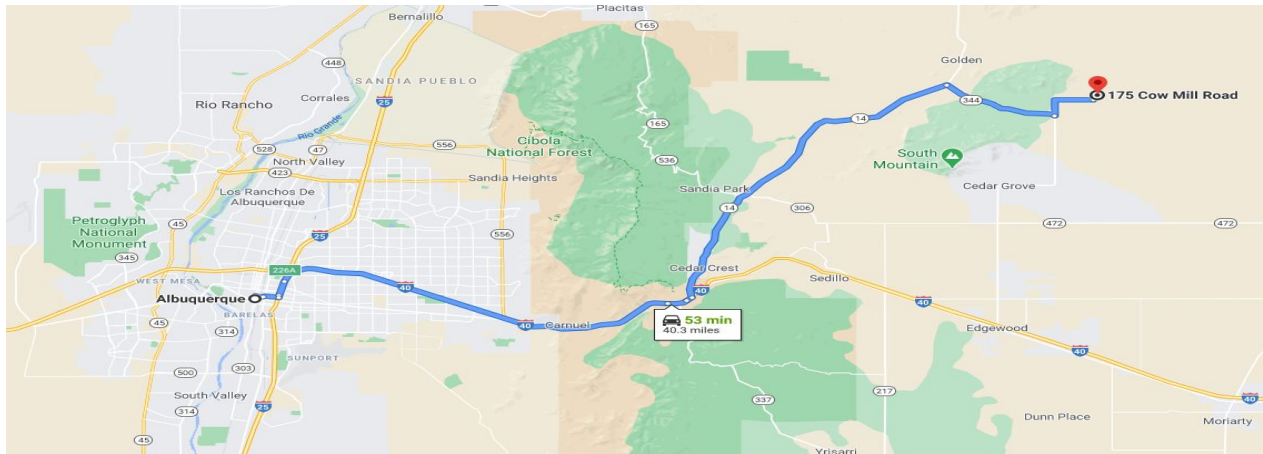
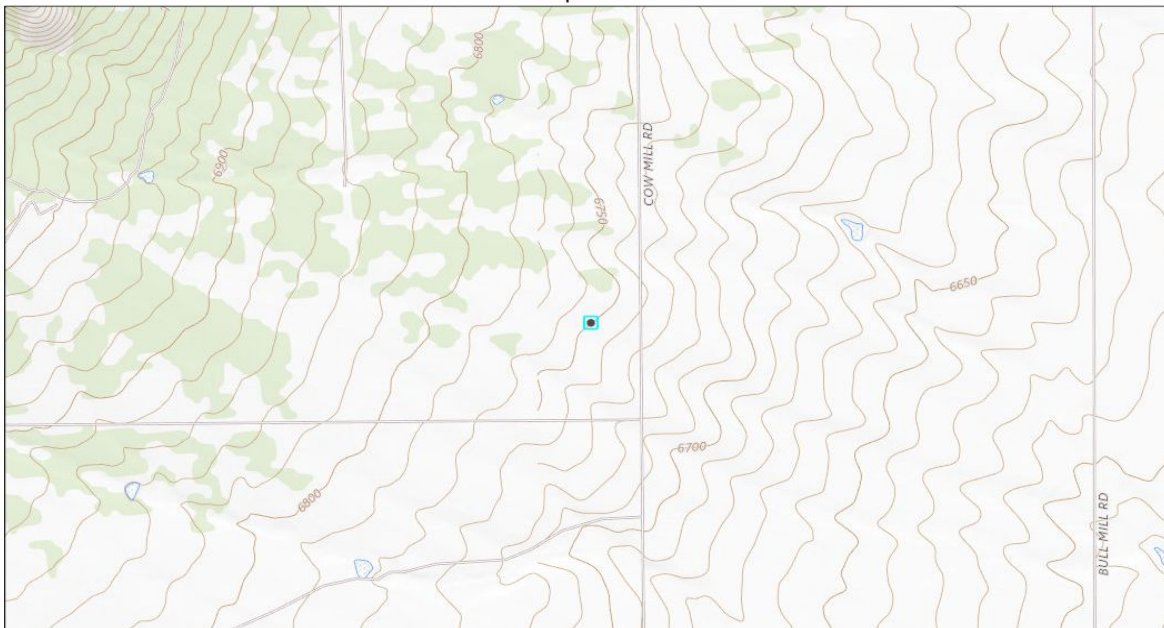


## New Mexico - 175 Cow Mill Road, Stanley, NM, 87056

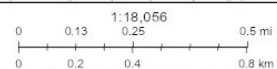
- 319 Acres, \$239,250 (\$750/Acre)
- Change in elevation is approx. 150ft/Mile
  - Did not have exact property lines, so did 3 mile square around the area
  - Very few sudden changes in elevation, mostly consistent slope
  - Land needs to be cleared of plants/rocks/debris
- Approximately 30 miles from Albuquerque, NM as the crow flies, approximately 40 following roads
- Albuquerque area has 310 sunny days (85% of the year)



## The National Map Advanced Viewer



9/8/2020, 8:03:15 PM



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census

Iowa - Ames ([Listing](#))

- Land is well over \$1000/Acre (some available plots in IA around \$3000/Acre and higher)
  - Plots have natural features that interfere, such as creeks and timber/forest
  - Most plots large enough are farmland, which increases price
- Topography is mostly flat
  - Small hills scattered throughout the area
  - Currently all farmland, so not a lot of landscaping would need to be done
- Approx 204 sunny days/year



Property just southwest of Ames

## Final Comparison

The property in New Mexico would be significantly better than the property in Iowa. The property in New Mexico has over 100 more sunny days, higher average irradiance each month, much more acreage that can be used to expand the solar farm, and is considerably cheaper than the property in Iowa. Iowa does have a lot of current/former farmland, which means less initial landscaping would need to occur.

## Methodology

To find the individual parcels of land, I used Zillow.com to see what was available. I ran into issues where the actual address of the land was not listed, but just a screenshot of Google Maps and a few roads/town names. Once I found a candidate, I used the US Geological Survey National Map tool to look at the topography of the land to look for sudden changes in elevation or problematic natural landmarks, such as creeks or rivers.

The minimum criteria for the land was to be at least 120 acres, since 1 MW of solar electricity generation takes up about 2 acres of land, and the land had to be mostly flat and not have many natural obstacles. From there, price and distance to large population centers were factored in.

## Solar Irradiance figures

Select Country:  ▼

Select State:  ▼

Select Town/City:  ▼

Solar Panel direction:  ▼



### Albuquerque Average Solar Insolation figures



Measured in kWh/m<sup>2</sup>/day onto a horizontal surface:

Jan	Feb	Mar	Apr	May	Jun
3.05	3.83	5.19	6.43	7.12	7.18
Jul	Aug	Sep	Oct	Nov	Dec
6.41	5.74	5.23	4.35	3.29	2.79

## Solar Irradiance figures

Select Country:  ▼

Select State:  ▼

Select Town/City:  ▼

Solar Panel direction:  ▼



### Ames Average Solar Insolation figures



Measured in kWh/m<sup>2</sup>/day onto a horizontal surface:

Jan	Feb	Mar	Apr	May	Jun
1.81	2.51	3.53	4.54	5.33	6.12
Jul	Aug	Sep	Oct	Nov	Dec
6.04	5.25	4.23	3.02	1.91	1.55