



COUNTY OF SANTA BARBARA  
PLANNING AND DEVELOPMENT

MEMORANDUM

TO: Planning Commissioners and Interested Parties

FROM: Kathy McNeal Pfeifer, Planner

DATE: July 21, 2014

RE: Cuyama Solar Staff Report and Final EIR Errata

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Cuyama Solar Facility Project

Hearing date: July 22, 2014

Case #'s: 13GPA-00000-00002; 10ORD-00000-00001; 13GPA-00000-00001; 10RZN-00000-00001; 10AGP-00000-00002; 10LLA-00000-00004; 13AGP-00000-00024; 10CUP-00000-00008; and 14GOV-00000-00006

Final EIR 11EIR-00000-00005, SCH# 2011121009

***The following revisions are to the Staff Report for the Cuyama Solar Project, dated July 3, 2014:***

1. Page 3, change the following four acreage numbers in the first three lines at top of page: (1) "406.12" to "413.9;" (2) "38.71" to "39.71;" (3) "241.16" to "247.07;" and (4) "79.51" to "79.52."
2. Page 5, change the following four acreage numbers in Recommendation No. 8: (1) "406.12" to "413.9;" (2) "38.71" to "39.71;" (3) "241.16" to "247.07;" and (4) "79.51" to "79.52."
3. Page 11, Table 2, right hand column, third row from the top, delete ", except APN 149-010-036, which contains the existing PG&E Electrical Substation."
4. Page 14, first paragraph, change the first sentence to read as follows:

The Proposed Project has ~~three~~ two components: (1) regulatory amendments to the Comprehensive Plan and Land Use Development Code (referenced in the EIR as CP/LUDC Amendments), and (2) discretionary permit approvals for the Cuyama Solar Facility, ~~and (3) The EIR also analyzed~~ additions to the Pacific Gas and Electric Company (PG&E) Cuyama Substation.

5. Page 25, second paragraph under *Lot Line Adjustment*, in the last sentence, change the following four numbers: (1) “406.12” to “413.9;” (2) “38.71” to “39.71;” (3) “241.16” to “247.07;” and (4) “79.51” to “79.52.”
6. Page 45, last sentence in right hand column (that runs onto page 46), strike out the words: “The County has previously viewed the importance of renewable energy production policies and mandates to support a finding of policy consistency for renewable energy projects.”
7. Page 59, last sentence in right hand column, replace the words “**Standard Mitigation Measure NOISE-04**” with “**SPEC-NOI-5.**”
8. Attachment A, Findings, Page 8, 4<sup>th</sup> paragraph (under *Noise, Cuyama Solar Facility*), third line, replace the words “Standard Mitigation Measure NOISE-04” with “SPEC-NOI-5.”
9. Attachment A, Findings, Page 8, 5<sup>th</sup> paragraph (under *Findings*), first line, replace the words “Standard Mitigation Measure NOISE-04” with “SPEC-NOI-5.”
10. Attachment A, Findings, Page 29, last full paragraph, fifth line from the bottom, replace the words “Standard Mitigation Measure NOISE-04” with “SPEC-NOI-5.”
11. Attachment C, Conditions of Approval, Page 1, under 1. Proj Des-01, the third paragraph (which is bold), the first line should be corrected to read as “The three existing parcels of total 493.4 gross acres; (APN 149-140-076), 413.9 gross acres.”

***The following revisions to 11EIR-00000-00005, SCH# 2011121009 need to be made to the Final EIR.***

12. Replacement pages for ES-11 and ES-12, 2-3 through 2-5 and 2-27 through 2-30 are attached. The changes to the pages are clarifying the project changes from the Draft EIR to the proposed Final EIR associated with the “Cuyama Substation Additions.” During the public comment period, staff received a letter from PG&E clarifying PG&E’s portion of the project components. These changes are more clearly reflected in the attached revised pages. (The Cuyama Substation Addition portion of the project description in the FEIR is not under the County’s permitting jurisdiction since PG&E is a public utility.)

Corrections to pages ES-11 and ES-12

Street and end at the PG&E Cuyama Substation. The Gen Tie-Line poles would be approximately 70- to ~~110~~100-feet tall and made of galvanized steel or wood. Four wires would be strung along the Gen Tie-Line route. First Solar's new Gen Tie-Line would perpendicularly cross the PG&E Taft-Cuyama #2 70kV Power Line west of the intersection of Kirschenmann Road and Washington Street. The description of this crossing is described in more detail below under PG&E Substation Additions. The portion of the Gen Tie-Line within the County road right-of-way along Kirschenmann Road requires County approval of a franchise agreement.

An approximately 19,600-sf Switchyard would be constructed on the north side of the existing approximately 20,275-sf PG&E Cuyama Substation. . The Switchyard and Substation would be separated by 80 feet, leaving approximately 11,200 sf of space between the two facilities. The Switchyard would contain one circuit breaker, a control and metering room, lines terminating into the existing PG&E circuit, and a telecommunications pole with a maximum height of 90 feet, supporting up to four microwave dishes.

## ES-2.3 PG&E Substation Additions

As described above, First Solar's new Gen Tie-Line would perpendicularly cross the PG&E Taft-Cuyama #2 70kV Power Line west of the intersection of Kirschenmann Road and Washington Street. PG&E would erect four to five new utility poles, with a maximum height of 120 feet, at this crossing so that the existing PG&E line would cross above the proposed Gen Tie-Line. The new poles may replace one or more existing poles along the line.

Improvements to the existing PG&E Cuyama Substation would include expansion of the substation area by approximately ~~2,760~~13,068 sf ~~by relocating due to relocation of~~ the existing fence line further south by approximately 24 feet, further west by approximately 25 feet, and further east by approximately 35 feet (refer to Figure ES-4). A ~~15-foot by 30-foot~~620-sf (i.e., 40 feet by 15.5 feet) battery building with a height of ~~12~~approximately 11 feet and an approximate 90-foot tall lattice telecommunications pole-tower would be located in this newly expanded area.

In the space between the Switchyard and the PG&E substation, the Gen Tie-Line would be supported by approximately three to five tubular steel poles that would be approximately 70- to 90-feet tall. Foundation sizes for these poles would be approximately 6 to 8 feet in diameter, 20 to 30 feet deep, and would be augured wherever feasible. Poles would be set in poured concrete foundations within the holes. Existing wood poles located to the north of the PG&E Cuyama Substation may be shortened or removed to accommodate the new line. Fiber cable and electrical wires needed for the system will be trenched from the Cuyama Solar Switch Breaker control building.

Construction and operation of the PG&E transmission line and substation improvements would be performed by PG&E. Public utilities, such as PG&E, are exempted from the County's permitting requirements. However, PG&E's planned improvements to their existing transmission line and substation are included in this CEQA analysis. This component will be referenced hereafter as the **PG&E Cuyama Substation Additions**.

## ES-3 Environmental Impact Report Scope

This EIR examines potential short- and long-term impacts of the Proposed Project. These impacts were determined through a rigorous process mandated by CEQA in which existing conditions are compared and contrasted with conditions that would exist related to construction and operation of the Solar Facility, as well as impacts that could occur from future projects as a result of adopting the CP/LUDC Amendments. The significance of each identified impact was determined using either County Thresholds of Significance (County of Santa Barbara 2008) or CEQA thresholds where there is no County threshold. The following categories are used for classifying project-related impacts.

- ***Class I - Significant adverse impacts that are unavoidable:*** Significant impacts that cannot be effectively mitigated. No measures could be taken to avoid or reduce these adverse effects to insignificant or negligible levels. Even after application of feasible mitigation measures, the residual impact would be significant.
- ***Class II – Significant but mitigable adverse impacts:*** These impacts are potentially similar in significance to those of Class I, but can be reduced or avoided by the implementation of mitigation measures. After application of feasible mitigation measures, the residual impact would not be significant.
- ***Class III – Adverse but not significant impacts:*** While not required under CEQA to reduce an impact to a level of insignificant, mitigation measure(s) are often applied to an identified adverse but not significant impact to mitigate the impact to the maximum extent feasible in accordance with Santa Barbara County policy.
- ***Class IV –Beneficial impacts:*** Effects that are beneficial to the environment.

For each significant impact identified, mitigation to reduce impacts to less than significant levels are identified. For the CP/LUDC Amendments, mitigation is in the form of development standards, which would be applied to the Proposed Project and all future utility-scale solar photovoltaic facilities seeking eligibility for the Utility-Scale Solar (PV) Photovoltaic Facility Overlay. For the Solar Facility, standard and special mitigation measures are applied. The Applicant has proposed many Environmental Commitments (see Section 2.6) as part of the Project application and the County has supplemented them by refining the Applicant's measures and adding new mitigation measures as needed. When mitigation measures cannot feasibly reduce such impacts to less than significant levels, the impacts are identified as Class I.

The EIR also presents alternatives to the Proposed Project, including the "No Project" alternative, and a qualitative assessment of the impacts that would be associated with the implementation of each alternative. Finally, the cumulative impacts of the Proposed Project when added to other local proposed or approved projects were also evaluated.

## ES-4 Notice of Preparation

The contents of this EIR were established based on the findings in the notice of preparation (NOP) and the environmental assessment that accompanied the NOP, as well as public and agency input during the scoping period. A copy of the NOP and comments received during the NOP review period are included in Appendix A. In accordance with Section 15063 of the State CEQA Guidelines, the NOP was prepared and distributed to responsible and affected agencies and other interested parties for a

Corrections to pages 2-3 through 2-5

Ordinance No. 661 would require a consistency rezone to AG-II. A utility-scale PV facility would be subject to discretionary approval of a Utility-Scale Solar Photovoltaic Overlay and CUP, and other related approvals, as well as required CEQA analysis and compliance. The County's CP and LUDC presently do not allow utility-scale solar PV facilities in the County. The Santa Barbara County Board of Supervisors adopted a resolution initiating amendments to the LUDC for all AG-II zoned properties on April 12, 2011. The proposed amendments to the CP evolved during the EIR analysis and provide vertical consistency between the CP and the LUDC.

## 2.2.2 Solar Facility and PG&E Cuyama Substation Additions

The Applicant is requesting a CUP and other discretionary approvals for construction and operation of a renewable energy project that would produce electric power through the use of solar PV modules located on approximately 327 acres of agricultural land southeast of the town of Cuyama in rural northeastern Santa Barbara County. The Solar Array would have a power-generating capacity of 40 MW (alternating current). Climate and insolation<sup>1</sup> data from the National Solar Radiation Database (NSRDB) and data collected from an onsite meteorological station managed by the Applicant suggest that the Solar Array could produce approximately 110,000 megawatt-hours (MWh) of electricity in its first full operating year. That would be equal to the annual electricity consumption of more than 15,600 average California households.<sup>2</sup>

Solar electric power would be produced by the Solar Array during daylight hours when electricity demand is highest. Assuming consistent demand, reducing the load on existing conventional energy sources that supply electricity to the grid (e.g., natural gas fired generation) by 110,000 MWh would reduce annual CO<sub>2</sub> emissions by 30,000 metric tons (Appendix C, pg. 46).

As part of the Solar Facility, Cuyama Solar would construct and operate a new 3-mile, 70-kV Gen Tie-Line to transmit the electricity generated by the Solar Array to the PG&E Cuyama Substation for connection to the grid. The Gen Tie-Line would originate at the northern portion of the Solar Array site and extend approximately 1.5 miles north along the east side of Kirschenmann Road where it would then extend west approximately 1.5 miles along the south and north side of Washington Street and end at the PG&E Cuyama Substation. The Gen Tie-Line poles would be approximately 70- to 100 feet tall and made of galvanized steel or wood. Four wires would be strung along the Gen Tie-Line route. First Solar's new Gen Tie-Line would perpendicularly cross the PG&E Taft-Cuyama #2 70kV Power Line west of the intersection of Kirschenmann Road and Washington Street. The description of this crossing is described in more detail below under PG&E Substation Additions. The portion of the Gen Tie-Line within the County road right-of-way along Kirschenmann Road requires County approval of a franchise agreement.

An approximately 19,600-sf Switchyard would be constructed on the north side of the existing approximately 20,275-sf PG&E Cuyama Substation. The Switchyard and PG&E Substation would be separated by 80 feet, creating an approximate 11,200-sf space between the two facilities. The

<sup>1</sup> Insolation is a measure of the solar radiation energy received on a given surface area in a given time. The name comes from a portmanteau of the words *incident solar radiation*. It is commonly expressed as average irradiance in watts per square meter (W/m<sup>2</sup>) or kilowatt-hours per square meter per day (kWh/m<sup>2</sup>/day [or hours/day]). In the case of PV power, it is commonly measured as kilowatt-hours per year per kilowatt peak rating (kWh/ [kWp•y]).

<sup>2</sup> Homes powered is based on 587-kWh/month average residential household electricity consumption in California (U.S. Energy Information Administration 2010).

Switchyard would contain one circuit breaker, a control and metering room, lines terminating into the existing PG&E circuit, and a telecommunications pole with a maximum height of 90-feet, supporting up to four microwave dishes.

As described above, First Solar's new Gen Tie-Line would perpendicularly cross the PG&E Taft-Cuyama #2 70kV Power Line west of the intersection of Kirschenmann Road and Washington Street. PG&E would erect four to five new utility poles, with a maximum height of 120 feet, at this crossing so that the existing PG&E line would cross above the proposed Gen Tie-Line. The new poles may replace one or more existing poles along the line.

Improvements to the existing PG&E Cuyama Substation would include expansion of the substation area by approximately 13,068-sf due to relocation of the existing fence line further south by approximately 24 feet, further west by approximately 25 feet, and further east by approximately 35 feet. A 620-sf (i.e., 40 feet by 15.5 feet) battery building with a height of approximately 11 feet and an approximate 90-foot tall lattice telecommunications tower would be located in this newly expanded area.

In the space between the Switchyard and the PG&E substation, the Gen Tie-Line would be supported by approximately three to five tubular steel poles that would be approximately 70- to 90-feet tall. PG&E would install these poles. Foundation sizes for these poles would be approximately 6 to 8 feet in diameter, 20 to 30 feet deep, and would be augured wherever feasible. Poles would be set in poured concrete foundations within the holes. Existing wood poles located to the north of the PG&E Cuyama Substation may be shortened or removed to accommodate the new line.

Fiber cable and electrical wires needed for the system will be trenched from the Cuyama Solar Switch Breaker control building. This entire component.

Construction and operation of the PG&E transmission line and substation improvements would be referenced hereafter as the **PG&E Cuyama Substation Additions** and would be performed by PG&E. Public utilities, such as PG&E, are exempted from the County's permitting requirements. However, PG&E's planned improvements to their existing transmission line and substation are included in this CEQA analysis.

In addition, PG&E plans to make improvements to the existing PG&E Cuyama Substation to accommodate the Solar Facility. These improvements include: expansion of the substation area by approximately 2,760 sf due to a 24-foot extension south of the existing southerly fence line, installation of a 15-foot by 30-foot battery building with a maximum height of 12 feet, and installation of an approximate 90-foot tall telecommunications pole located within the Cuyama Substation fenced area.

## 2.3 Physical Setting

### 2.3.1 CP/LUDC Amendments

#### 2.3.1.1 Regional Setting

For planning purposes, the Board of Supervisors defined eight distinctive rural regions in the County. Each supports its own mix of agricultural production determined primarily by the area's climate, soils, topography, and hydrology. The Cuyama Valley Rural Region encompasses 112,335 acres (Figure 2-1). The Valley's inland location lends itself to dramatic seasonal temperature variations with freezing winters and hot, dry summers. Despite these weather conditions and the limited availability of water, the alluvial plain of the Cuyama River successfully produces a number of row crops including carrots, onions and garlic, and field crops including small grains and alfalfa. Pistachio orchards are found in the Ventucopa area, deciduous fruits are grown along Hwy 166, and cattle grazing operations occupy the canyon bottoms and foothills of the Sierra Madre Mountains. Alfalfa, apples, and some wine grapes occur as well, though intensive agriculture is restricted by limitations on water availability.

Crop production in the region relies on irrigation because of low rainfall averages (6 to 8 inches per year), hot summer temperatures, and the sandy soils in the Cuyama Valley. As far back as 1972, a U.S. Department of Agriculture (USDA) Soil Survey noted that water levels in Cuyama Valley wells

Corrections to pages 2-27, 2-29, and 2-30

The 34.5-kV output from multiple step-up transformers would be supplied to two PV combining switchgears (PVCSs) via a network of underground cables. The PVCS are 33 feet long, 12 feet wide, and 11 feet high; one would be located within the Solar Array site on the northern boundary, west of Kirschenmann Road, and the other would be located within the Solar Array site on the northern boundary, east of Kirschenmann Road. The 34.5-kV output from the PVCS would travel along aboveground lines to the Solar Array's onsite substation's transmission pole. The aboveground 34.5-kV lines would be installed on approximately 25 wooden poles, up to 45 feet tall.

The proposed Solar Array on-site substation (identified in Figure s-4 and 2-7) would consist of transformers, switchgear, a static mast with a maximum height of 70 feet, a dead-end structure with a maximum height of 65-feet, and related equipment. The substation would occupy an area of approximately 38,700 sf; approximately 2,260 sf of this area would be impervious. Aside from the static mast and dead-end structure, the average height of the equipment in the substation would range between 20 and 25 feet. The substation would transform the 34.5-kV output to 70 kV for export to the local transmission system via the proposed Gen Tie-Line. The perimeter of the onsite substation would have an approximately 6-foot tall fence made of 2-inch chain link, with three strands of barbed wire running along the top. Located west outside the onsite substation would be a 90-foot telecommunications pole supporting one microwave dish up to three feet in diameter. Gated access into the substation would be provided at three locations.

At each corner of the Solar Array site, two anemometer towers (for a total of eight) up to 20 feet in height would be installed to monitor wind speed and communicate with the PCS in each array. The perimeter of the Solar Array property and construction area would be fenced. The fence would be 2-inch chain link, approximately 6 feet tall, with three strands of barbed wire along the top. The fence would be set back 30 feet from the property lines and would have a 6-inch clearance between the fence's bottom tension cable and the ground, allowing movement of small mammals, such as the San Joaquin kit fox, across the Solar Array site. A 20-foot wide dirt access road would be located within the fenced area and along the perimeter of the Solar Array site. Between each of the arrays, compacted dirt access roads 20 to 22 feet in width would run the length of the Solar Array site and connect with the perimeter dirt access road. Access to the Solar Array site would be through two locked gates installed along Kirschenmann Road. Identification signs for speed limits and safety would be posted along the perimeter roads.

### Gen Tie-Line and Switchyard

The first approximately 1.5 miles of the Gen Tie-Line would be constructed from the Solar Array site along the east side of Kirschenmann Road to the intersection at Washington Street. The Gen Tie-Line poles would be a maximum of approximately 70 to 100 feet in height with the span between poles ranging from approximately 300 to 500 feet and made of galvanized steel or wood (refer to Figure 2-7).

The Gen Tie-Line would then run approximately 1.5 miles west to the Cuyama Substation, along Washington Street, paralleling the existing PG&E line. The PG&E line travels on the south side of Washington Street for approximately 0.25 mile then crosses to the north side of Washington Street. The first approximately half mile (six poles) of the -Project Gen Tie-Line would be on the south side of Washington Street, south of the existing PG&E transmission line before the line would transition to the north side by crossing Washington Street and crossing under the existing PG&E line. ~~The existing PG&E line would be raised by approximately 10 feet to meet conductor clearance safety standards. To accommodate the Project Gen Tie-Line, two new steel poles up to 110 feet tall would~~

be installed by PG&E on either side of this crossing location. The Project Gen-Tie Line would then continue the remaining one mile west to the Cuyama substation on the north side of the existing PG&E line. The Gen Tie-Line would terminate on the north side of PG&E's Cuyama Substation at the proposed Switchyard (see Figure 2-4). An easement approximately 80 feet in width (40 feet on each side of the poles) would be secured along the Gen Tie-Line route to provide for construction and maintenance of the Gen Tie-Line. The easement does not preclude farming operations, except for a 10-foot radius around each pole.

### **Switchyard**

An approximate 19,600-sf Switchyard would be constructed on the north side of the existing 20,275-sf PG&E Cuyama Substation. The Switchyard and Substation would be separated by 80 feet, creating an approximate 11,200-sf area between the two facilities. The Switchyard would contain approximately 625 sf of impervious area. Components within the Switchyard would include approximately two poles with a maximum height of 70 feet, one approximately 400-sf circuit breaker (with a maximum height of 20 feet), and three metering units (with a maximum height of 20 feet), a 225-sf control and metering room (with a maximum height of 11 feet), and one 90-foot tall telecommunications pole on a 26-sf foundation pad. The telecommunication pole would support up to four microwave dishes, each dish approximately 3 feet in diameter and all spaced within 10 feet at the top of the pole. A ground grid up to 1,600 sf in area would be installed approximately two feet below the surface of the Switchyard.

### **PG&E Cuyama Substation Additions**

The existing PG&E transmission line travels on the south side of Washington Street for approximately 0.25 mile then crosses to the north side of Washington Street. The PG&E line would be raised by approximately 10 feet to meet conductor clearance safety standards. To accommodate the Project Gen Tie-Line, four to five new steel poles up to 120 feet tall would be installed by PG&E on either side of this crossing location. The new poles may replace one or more existing poles along the line.

Improvements to the existing PG&E Cuyama Substation would include expansion of the substation area by approximately 13,068 sf due to relocation of the existing fence line further south by approximately 24 feet, further west by approximately 25 feet, and further east by approximately 35 feet. A 620-sf (i.e., 40 feet by 15.5 feet) battery building with a height of approximately 11 feet and an approximate 90-foot tall lattice telecommunications tower would be located in this newly expanded area.

In the space between the Switchyard and the PG&E substation, the Gen Tie-Line would be supported by approximately three to five tubular steel poles that would be approximately 70 to 90 feet tall. Foundation sizes for these poles would be approximately 6 to 8 feet in diameter, 20 to 30 feet deep, and would be augured wherever feasible. Poles would be set in poured concrete foundations within the holes. Existing wood poles located to the north of the PG&E Cuyama Substation may be shortened or removed to accommodate the new line. Fiber cable and electrical wires needed for the system will be trenched from the Cuyama Solar Switch Breaker control building.

Construction and operation of the PG&E transmission line and substation improvements would be performed by PG&E. Public utilities, such as PG&E, are exempted from the County's permitting requirements. However, PG&E's planned improvements to their existing transmission line and substation are included in this CEQA analysis.

In addition, PG&E plans to make improvements to the existing PG&E Cuyama Substation to accommodate the Solar Facility. These improvements include: expansion of the substation area by approximately 2,760 sf due to a 24-foot extension south of the existing southerly fence line, installation of a 15-foot by 30-foot battery building with a maximum height of 12 feet, and installation of an approximate 90-foot high telecommunications pole located within the Cuyama Substation fenced area and located on PG&E-owned property.

## Construction

Construction activities associated with the Solar Facility would require up to 14 consecutive months. Construction of the Solar Facility, including Gen Tie-Line with Switchyard and additions to the PG&E Cuyama Substation would include site preparation, equipment installation, testing, and site cleanup work. Table 2-3 identifies the construction equipment anticipated to be used in each phase of construction of the Solar Array site and Table 2.4 identifies construction equipment anticipated to be used in construction of the Gen Tie-Line and Switchyard and additions to the PG&E Cuyama

