

700 Universe Boulevard  
Juno Beach, FL 33408  
T +1.561.691.7171

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<b>Subject</b>	<b>Conditional Use Permit Application for the Kola Energy Storage Project</b>		
<b>Attention</b>	Albert Lopez, Planning Director	<b>Company</b>	Alameda County Planning Department
<b>Address</b>	224 West Winton Avenue, Room 111, Hayward, CA 94544	<b>Phone No.</b>	510-670-5400
<b>From</b>	Dexter Liu	<b>Date</b>	September 14, 2021
<b>Project</b>	Kola Energy Storage Project		
<b>Copies to</b>	Patti Murphy, Kola Energy Storage, LLC.		

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Enclosed is a Conditional Use Permit application for the proposed Kola Energy Storage System Project. The applicant, Kola Energy Storage, LLC, is a wholly owned, indirect subsidiary of NextEra Energy Resources, LLC. The proposed Project is a Battery Energy Storage System (BESS) on a 210-acre site within the Wind Resource Area under the Alameda County's East County Area Plan (ECAP). Phase 1 includes a 400-megawatt BESS, with an anticipated second phase adding an additional 300 MW (700 MW total). The Project also includes a 230-kilovolt overhead generation tie line (gen-tie line), which would extend to the adjacent Pacific Gas and Electric (PG&E) Tesla Substation.

As renewable energy production grows, installation of BESS systems is necessary throughout the State, including in Alameda County and the surrounding region to provide public utility services to the local region by 2024. In addition, the state of California has taken action through the Governor's Emergency Proclamation issued July 2021 to expedite permitting of clean energy projects in an effort to prevent future emergency shortfall. Furthermore, BESS projects, such as the proposed project, are permitted under the Large Parcel Agriculture designation because such uses are similar to both "windfarms and related facilities" as well as "utility corridors" and, importantly, are compatible with agriculture. The proposed Project would be properly sited near the Tesla Substation and other infrastructure and utility uses, and thus would not be incompatible with or interfere with nearby agricultural or residential uses. At the same time, the proposed Project's overall footprint would involve development of a portion of a 210-acre site, which includes approximately 30 undevelopable acres within the UPRR right-of-way.

Please notify us immediately if the message is unclear or incomplete.

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# Transmittal

Conditional Use Permit Application  
Kola Energy Storage Project  
September 14, 2021

The Kola Project involves a far smaller footprint of disturbance and far fewer environmental impacts than other approved projects such as Aramis. Again, in determining that utility-scale solar is consistent with the LPA designation and the ECAP, the County expressly allowed BESS as part of the determination: "In the large Parcel Agriculture (LPA) designation, the County's analysis has concluded that solar development is comparable to other uses specifically allowed, including public and quasi-public uses, windfarms, utility corridors, and similar uses compatible with agriculture" (Alameda County Board of Supervisors, Resolution No. R-2021-91).

We ask that you review the enclosed conditional use permit application and consider approval of a conditional use permit for the proposed Kola Energy Storage System Project. As we have not yet received a refund for our prior application submittal in December 2020, we have not included a fee with this application. If supplemental payment for this application is required, it will be provided upon request.

The enclosed conditional use permit application package includes the following materials. If hard copies of the application package, or portions thereof, are required, they can be provided.

- Standard Application Form
- Application Supplement Form
- Required Findings
- Project Description

We look forward to consulting with the County on this vital utility project.

## Enclosures/Attachments

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Letter  | <input type="checkbox"/> Sketch                                      |
| <input type="checkbox"/> Contract Documents | <input type="checkbox"/> Modification Drawings                       |
| <input type="checkbox"/> Print              | <input type="checkbox"/> Clarification Drawings                      |
| <input type="checkbox"/> Sample             | <input type="checkbox"/> Shop Drawings                               |
| <input type="checkbox"/> Proposal           | <input type="checkbox"/> Other: <a href="#">Click to enter text.</a> |

## Action Requested

- |   |   |
|---|---|
| <input type="checkbox"/> Resubmit   | <input type="checkbox"/> Please Comment     |
| <input checked="" type="checkbox"/> For Your Review                       | <input type="checkbox"/> For Your Approval  |
| <input type="checkbox"/> Information Only                                 | <input type="checkbox"/> Reply ASAP         |
| <input type="checkbox"/> Your Information and File                        | <input type="checkbox"/> For Your Signature |
| <input type="checkbox"/> Other: <a href="#">Click here to enter text.</a> |   |

# Standard Application

Application Received	
By: _____	Date: _____
Application #: _____	

**WE WILL NOT ACCEPT INCOMPLETE SUBMITTALS!!**

**1. Type of application:** *Check one or more*

Boundary Adjustment  
  Subdivision  
  Conditional Use Permit  
  Variance  
  Site Development Review  
  Rezoning  
 Administrative Conditional Use Permit  
  Sign Review  
  Zoning Verification Letter  
  Other:

**2. Brief description of application:** \* Conditional Use Permit application for the Kola Energy Storage Project, which will operate as a battery energy storage system.

**3. Project site:**

<u>17950 Midway Road</u>	<u>Tracy</u>	<u>CA</u>	<u>95377</u>
Address	City	State	Zip Code

**4. Assessor's parcel number(s):** 099B795000103; 099B795000104; 099B795000300

**5. Special instructions to access property** (e.g. dogs, gates, alarms, etc.): \* Owner will need to unlock gates for access.

**6. Land owner:** Bill Langford

<u>17950 Midway Road</u>	<u>Tracy</u>	<u>CA</u>	<u>95377</u>
Address	City	State	Zip Code

209-836-3215

Contact Phone(s)	Fax #	Email Address
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**7. Applicant:** Anthony Pedroni, Vice President      Kola Energy Storage, LLC

(if different from above)      NAME      COMPANY

Same as above      700 Universe Boulevard      Juno Beach      FL      33408

Address      City      State      Zip Code

Contact Phone(s) (561) 304-5622      Fax #      Email Address anthony.pedroni@nexteraenergy.com

**8. Primary contact person:** Dexter Liu, Project Director      Kola Energy Storage, LLC

NAME      COMPANY

Land Owner    Applicant      700 Universe Boulevard      Juno Beach      FL      33408

Other (fill in information)      Address      City      State      Zip Code

(561) 694-3795      dexter.liu@nexteraenergy.com

Contact Phone(s)      Fax #      Email Address

**FOR PLANNING DEPARTMENT USE ONLY**

Side \_\_\_\_\_ Distance \_\_\_\_\_ (f,m) Direction \_\_\_\_\_

Cross Street \_\_\_\_\_ GP LU Desig. \_\_\_\_\_

Uninc. Area/District \_\_\_\_\_ Zoning \_\_\_\_\_

ROW \_\_\_\_\_ FWL \_\_\_\_\_ SBL \_\_\_\_\_

Lot Area: \_\_\_\_\_ (ft) \_\_\_\_\_ (ac)

History \_\_\_\_\_

Alameda County  
**COMMUNITY DEVELOPMENT AGENCY**   
**PLANNING DEPARTMENT**

Offices: 224 West Winton Avenue, Room 111  
 Hayward, CA94544  
 Permit Center: 399 Elmhurst Street, Room 141,  
 Hayward CA 94544  
 Ph: (510) 670-5400      Fax: (510) 785-8793

www.acgov.org/cda/planning      June 2020

\*If more space is needed, please attach a separate sheet.

# AFFIDAVIT:

1. I attest under penalty of perjury to the truth and accuracy of all the facts, exhibits, maps, and attachments presented with and made a part of this application.
2. I hereby authorize County staff and members of review bodies, including but not limited to the Castro Valley Municipal Advisory Council, the Board of Zoning Adjustments, the Planning Commission, and the Board of Supervisors, to enter upon my property to verify or obtain information, to view the property, or to photograph the property and the surrounding area as part of the application review process. (Please note any special instructions regarding access to your property such as dogs, gates, alarms, etc.)

I understand that staff will make all efforts to notify me of such site visits, but that this may not always be possible.

3. I understand that unless this is a fixed fee application, the money I have submitted constitutes a deposit and that costs necessary to process the application will be billed against this deposit. The County will bill charges for County staff time spent processing this application at an hourly rate that represents salary plus overhead and will bill consultant charges at actual cost. In addition, the County will bill direct costs, including but not limited to actual costs of mailing or publication of notices or actions, against the deposit.

The deposit is based on the typical time it takes to process an application similar to mine. However, processing time can vary depending on the specifics of an application and it is possible, particularly if my application becomes controversial, that the processing time, and thus the cost, may exceed the estimated time. If this happens, I am responsible for the additional costs. When costs approach the amount of my deposit, the County will notify me and request an additional deposit based on the County's best estimate of the additional time necessary to complete the application review.

It is also possible that the costs to process my application will be less than the deposit. If this happens the County will refund the balance of my deposit, less additional post-approval costs such as landscape inspections, after the appeal period for the approval has passed. Should I withdraw my application, County staff will stop working on it and refund the balance of my deposit less any costs to which the County has committed as of the date of withdrawal, such as costs of publication.

I further understand that I am liable for the cost of processing my application regardless of whether the County approves, approves with modifications, or denies my application, and that all applications approved by the County will be conditioned to require that the County be made whole for any costs of processing the application that may be outstanding.

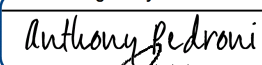
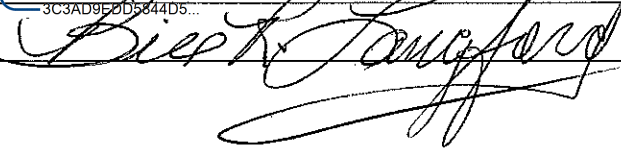
4. I understand that acceptance of this application and accompanying material does not constitute acceptance of this application as complete. I further understand that although my application may be deemed complete for purposes of initial review, it is possible that I may need to submit additional information as the review proceeds or after final action on my application before I can implement my project, including but not limited to the following:

- Additional information as needed to complete an environmental review under the California Environmental Quality Act;
- Additional information as needed to clarify the application or address questions raised either as a result of responses received from the referral of my application to other public agencies and interested parties or in response to issues raised at public hearings by members of the hearing body or the general public who submit written or oral testimony at the hearings;
- Final information that will be necessary to meet Public Works Agency Stormwater Management requirements;
- Revised plans, elevations, or other material necessary to illustrate or otherwise conform to changes that the final approval body makes to my original submittal;
- Additional material, such as landscape or drainage improvement plans, that may be required under a condition or provision of approval.

I understand that delay of information submittal or submittal of inaccurate information may delay the review process.

5. I understand that if I make changes in proposed plans during the review process or in approved plans before construction permits are issued, during construction, or prior to final inspection and occupancy, such changes will require additional design review by County staff and the advisory and approval bodies. It is my responsibility to submit such revised plans to County staff in a timely manner. This may require four to six or more additional weeks of review and processing time from the time I submit complete plans. Depending on the final outcome of the approval process, I may have to submit revised plans consistent with that action as noted above. In addition, any unauthorized building, demolition, grading, landscaping, or other site plan changes made during the review period will require correction at my expense.
6. I understand that any representations made to me in a pre-application meeting or otherwise prior to or during the application review process regarding cost or timing are best-guess estimates and that I cannot bind or hold the County to them. I understand that factors such as changes to my project or issues raised by approval bodies or members of the public during the review process, including at public hearings, can extend the time necessary to complete the review and reach a decision on my application.
7. Furthermore, I hereby agree to hold the County harmless from all costs and expenses, including attorney's fees, that the County incurs or held to be the liability of the County in connection with the County's defense of its actions in any proceeding brought in any State or Federal Court challenging the County's actions with respect to my project. This includes but is not limited to actions brought pursuant to the California Environmental Quality Act, the Alameda County Zoning Ordinance, or other State and County code and ordinance requirements. If I fail to defend adequately the County, the County may provide its own legal defense and subdivider or its successors shall be responsible for the County's reasonable attorneys' fees. This agreement to hold the County harmless shall extend to any successors in interest to this application. I agree that if this application is signed by more than one person the obligations and liabilities of each person is joint and several, with each person being responsible for the entire obligation.

DocuSigned by:

Applicant Signature:		Date: September 8, 2021
Landowner Signature:		Date: 5-3-21

## Conditional Use Permit

- For complete filing instructions, see the **Standard Application** form.
- For general procedures and guidelines, read the handout “*Applying for a Conditional Use Permit*”
- You must make an appointment with a Planning Department staff member to determine if materials or information (in addition to those listed below) are needed to evaluate your project.
- If Conditional Use Permit involves new construction or additions, then subject information required per Site Development Review Supplemental forms.
- If you have any questions, please call (510) 670-5410.

1. Applicant Name: Kola Energy Storage, LLC
2. Contact the Planning Department at (510) 670-5410 to make an appointment with a Senior Planner to submit the following materials to the Alameda County Planning Department (Zoning Counter) at 399 Elmhurst Street, Hayward, California. **We will not accept incomplete applications.** Please use the following checklist to ensure the application is complete.

## Required

- Standard Application** form.
- Application Supplement:** *Conditional Use Permit* form.
- Filing Fee Deposit:** Make check payable to “**Treasurer, County of Alameda.**”

**\$2,500** deposit for all Districts. **\$4,000** deposit to review: *an outdoor recreation facility, sanitary landfill, flight strip, heliport, cemetery, church, school or solar farms.* **\$6,000** deposit for Wireless Telecommunication Facilities. Please refer to the “Requirements for Telecommunications Facilities” supplemental form found on the Planning website. If this deposit is depleted, the Planning Staff will advise you that additional funds must be deposited to continue the processing of this application. Any remaining unexpended money will be refunded.

- Plot plan (20 copies):** Show all information as shown on the **Sample Plot Plan** on the back of this form. Minimum paper size is 8½ x 11 inches. Larger plans shall be folded to 8½ x 11 inches.
- Written Statement:** On an attached sheet, briefly explain how your property specifically relates to each of the following findings required to approve a Conditional Use Permit.
  1. The use is required by the public need.
  2. The use will be properly related to other land uses transportation and service facilities in the vicinity.
  3. The use, if permitted, under all the circumstances and conditions of the particular case, will not materially affect adversely the health or safety of persons residing or working in the vicinity, or be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood.
  4. The use will not be contrary to the character or performance standards established for the District in which it is to be located.

## Alameda County Planning Department

224 West Winton Avenue, Room 111, Hayward, CA 94544

Phone: (510) 670-5400 Fax: (510) 785-8793 Web: <http://www.acgov.org/cda/planning>

C-

# Conditional Use Permit Application Supplement

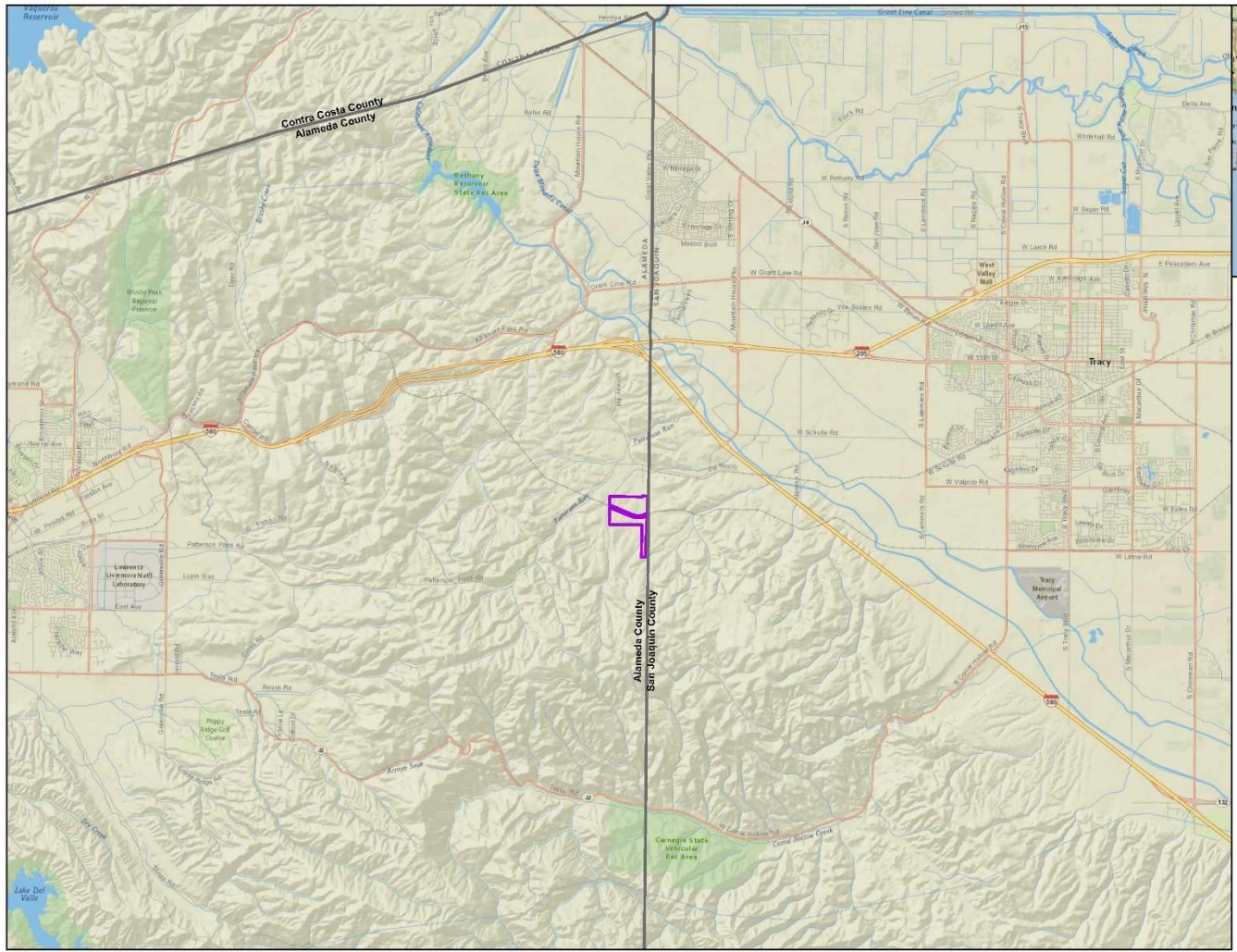
- Supporting Documents:** Other documents to support the project may include elevations, floor plans, applicable permits from other County, State or Federal agencies.
- If Conditional Use Permit involves new construction or additions,** then subject information required per Site Development Review Supplemental forms.
- Other Information requested by Planner:** None
- Call for appointment to meet with a Senior Planner for submittal.**
- Applicant Signature verifying that the applicant understands the application process:**



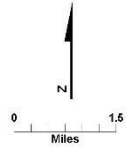
Applicant Signature

09/08/2021

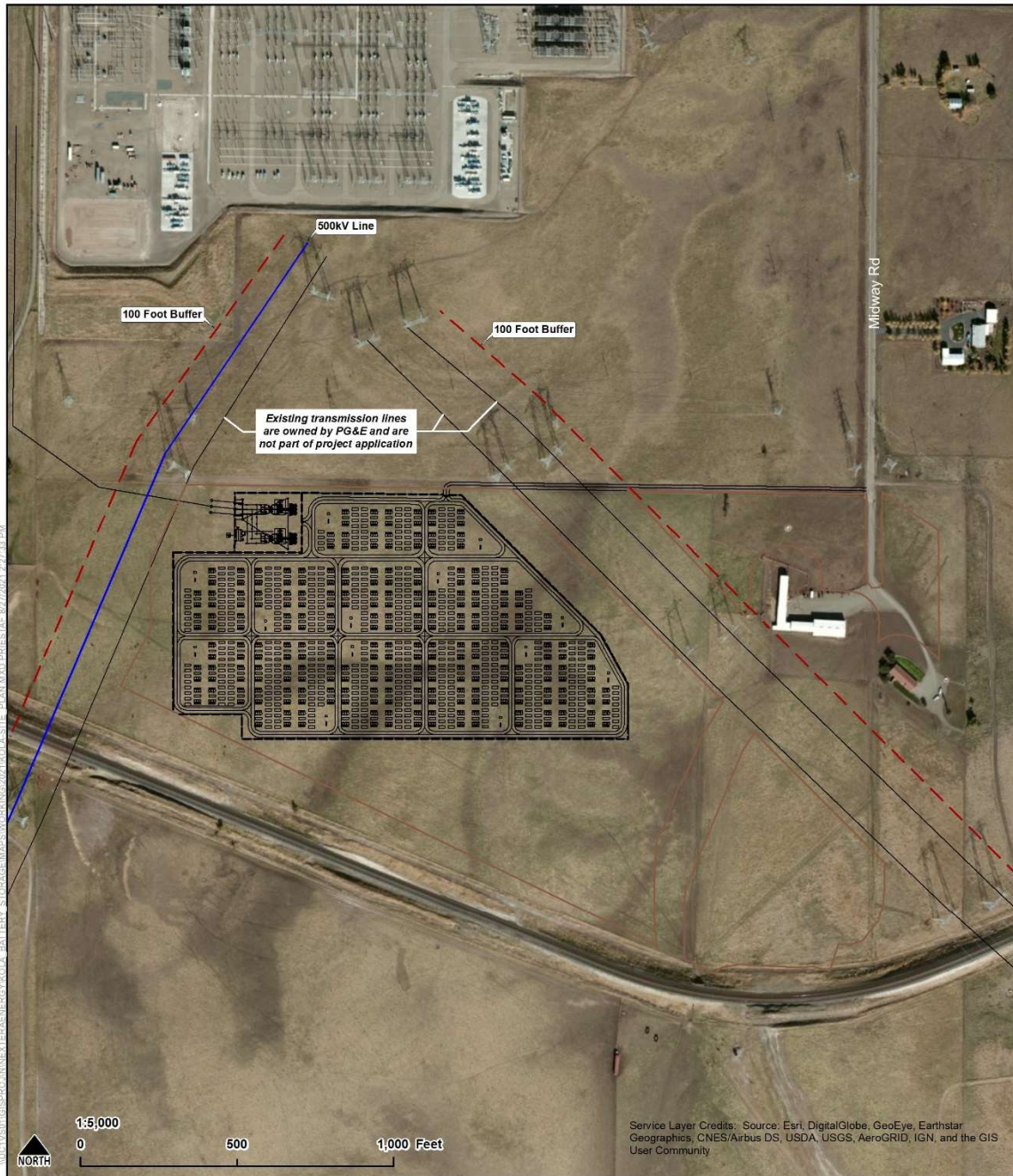
Date



**LEGEND**  
 Project Location



**Figure 1**  
**Vicinity Map**  
 Kola Battery Energy Storage System Project  
 Alameda County, California



- LEGEND**
- Fence
  - Property Line
  - 500kV Line
  - - - 100 Foot Buffer

**NOTES:**  
 LAYOUT IS CONCEPTUAL AND IS SUBJECT TO CHANGE BASED ON ADDITIONAL ENVIRONMENTAL DILIGENCE, TECHNOLOGICAL SELECTIONS, ENGINEERING, AND CIVIL SETBACK DISTANCES. ORIENTATION, FENCE DIMENSIONS, AND GRADING LIMITS OF DISTURBANCE FOR THE SWITCHYARD AND NEER SUBSTATION ARE SUBJECT TO CHANGE AND COULD VARY SIGNIFICANTLY IN FINAL DESIGN.

**Figure 2**  
**Preliminary Site Plan**  
 NextEra Energy Resources, LLC  
 Kola BESS Project  
 Alameda County, California

**Jacobs**



**Required Findings Statement  
Kola Energy Storage Project  
Conditional Use Permit Application**

# Kola Energy Storage Project

## Conditional Use Permit Application Required Findings Statement

**Applicant:** Kola Energy Storage, LLC

**Project Name:** Kola Energy Storage Project

**APN:** 099B795000103; 099B795000104; 099B795000300

**Development Type:** Battery Storage for Renewable Energy Resource Integration

The Alameda County Planning Department Guide for Obtaining a Conditional Use Permit requires the following findings:

### 1. The use is required by the public need

Kola Energy Storage, LLC, a wholly-owned, indirect subsidiary of NextEra Energy Resources (NEER), proposes to develop the Kola Energy Storage Project (proposed Project). The proposed Project will provide up to 400 MW of energy battery storage in Phase 1, with the potential Phase 2 providing an additional 300 MW (700 MW total). Renewable energy generation is needed as a cost-effective source of power for the northern California electrical grid, which can displace facilities using fossil fuels that emit greenhouse gases. However, incorporating intermittent resources such as wind and solar requires an accompanying portfolio of resources and contract provisions that provide operational resiliency to maintain electrical supplies at the time required.

Battery energy storage systems (BESS), such as the proposed Project, are flexible resources and, therefore, beneficial to reliable, low-carbon grid operations. Battery storage is necessary to fully integrate renewable energy resources into grid operations, providing voltage stability and electrical supply on demand. Furthermore, the proposed Project would collect and store excess energy from the grid, including energy generated from renewable energy sources, such as solar and wind, (typically during daytime hours) and discharge that energy at peak hours in the evening when renewable energy becomes less available. Development of the proposed Project is necessary to provide optimum service and reliability by allowing energy from renewable sources to service customers for longer periods throughout the day. The proposed Project would expand the capability and reliability of the existing infrastructure, which is necessary to create adequate service for the eastern portion of Alameda County.

The state has taken action to advance energy storage, including the passage of Assembly Bill 2514 and the resulting CPUC decision for energy storage procurement targets for each of the investor-owned utilities, totaling 1,325 megawatts to be completed by the end of 2020 and implemented by 2024. The CPUC's orders detailing the state's critical need for energy storage are described below.

- Decision Requiring Electric System Reliability Procurement for 2021 – 2023 (Decision 19-11-016): The CPUC found that the need for system resource adequacy and renewable integration resources began in 2021 and will continue through at least 2023, as more renewable resources are added to the grid to meet California's climate action goals and fossil fuel and nuclear power plants are retired.
- Decision Establishing Process for Backstop Procurement Required by Decision 19-11-016 (Rulemaking R.20-05-003): Based on analysis conducted by CPUC staff, this ruling defines the

need for electric system reliability between 2024 and 2026. CPUC defined a need for 7,410 MW of effective capacity additions by 2026. When added to the 3,300 MW of effective capacity already required by CPUC's decision D.19-11-016 (described above), the total closely approximates CPUC's plan to meet energy reliability needs by 2026

On July 30, 2021, the Governor of California issued an Emergency Proclamation to expedite clean energy projects and relieve demand on the electrical grid in the face of extreme climate impacts across the West that threaten the state's energy supply and limit the state's ability to import additional energy. The proclamation includes actions to accelerate the state's transition to clean electricity by streamlining permitting and other processes to bring new resources on-line as fast as possible, particularly battery storage projects to capture abundant renewable generation available during the day. The proclamation allows greater energy production and creates incentives for back-up power generation (including battery storage), freeing up energy capacity on the grid during critical times when extreme heat events or the interruption of transmission lines from wildfires or other causes threaten energy supply during high demand periods.

## **2. The use will be properly related to other land uses, transportation and service facilities in the vicinity**

The Project is located on land that is heavily utilized for various utilities and does not have active agriculture use. The Project site includes the Union Pacific Railroad and multiple high voltage power lines. This proposed Project site is directly south of Pacific Gas & Electric's (PG&E) 70-acre, 500 kilovolt Tesla (electric) Substation. Surrounding land uses include several high-voltage transmission lines, nearby wind farms, agriculture and single-building residential homes (with affiliated agricultural uses). The project site's adjacent location to the Tesla substation, minimizes the generation line length from the proposed Project to the substation and minimizes the amount of new access roads required to be constructed in undeveloped areas. Due to the proximity to numerous large-scale utilities and the surrounding topography, the proposed Project is within the viewshed of Tesla Substation.

The proposed Project is consistent with applicable plans and policies, including the East County Area Plan (ECAP). The Project site is zoned as Large Parcel Agriculture (LPA) within the Wind Resources Area (WRA). The ECAP expressly permits large-scale utility uses under the LPA designation with the following language, "...this designation permits...windfarms and related facilities, utility corridors, and similar uses compatible with agriculture" (ECAP, p. 47). Furthermore, the LPA designation exempts infrastructure from the building acreage limitations otherwise applicable under this zoning designation. Policy 13 defines "infrastructure" as "...all structures and development necessary to the provision of public services and utilities" and further states, "This policy shall not bar 1) new, expanded or replacement infrastructure necessary to create adequate service for the East County, 2) maintenance, repair or improvements of public facilities which do not increase capacity, and 3) infrastructure such as pipelines, canals, and power transmission lines, which have no excessive growth-inducing effect on the East County area" (ECAP, p. 10). The proposed project would provide vital utility infrastructure in the form of free-standing battery storage units. The proposed project does not include accessible buildings or enclosures.

The Project is consistent with these provisions because it involves the construction and operation of "infrastructure" as defined and allowed under ECAP Policy 13. As renewable energy production grows, installation of BESS systems is necessary throughout the state, including in Alameda County and the surrounding region, in order to provide public utility services. At the same time, BESS has no "growth-

inducing effect on the East County area” because, like other utility services, it is designed and operated to meet demand for electricity, and in no way would create a barrier to population or building growth.

Also, BESS is permitted under the LPA designation because it is a similar use to both “windfarms and related facilities” as well as “utility corridors” and is compatible with agriculture as are these similar uses. The County recently made this determination in approving the Aramis Solar Project, which would cover 410 acres across four parcels in the ECAP area with photovoltaic solar panels, and most importantly, battery storage units covering five acres. The proposed Project would be properly sited near the Tesla Substation and other infrastructure and utility uses, and thus would not be incompatible or interfere with nearby agricultural or residential uses. At the same time, the proposed Project’s overall footprint would involve development of a portion of a 210-acre site, which includes approximately 30 undevelopable acres within the UPRR right-of-way, involving a far smaller footprint of disturbance and far fewer environmental impacts than other approved renewable energy projects such as Aramis.

As a matter of course, the County must consider the proposed Project in the same manner that it considered the Aramis Project under the ECAP, LPA designation, and Policy 13. The County has determined that utility-scale solar and battery storage is consistent with the LPA designation and the ECAP: “In the large Parcel Agriculture (LPA) designation, the County’s analysis has concluded that solar development is comparable to other uses specifically allowed, including public and quasi-public uses, windfarms, utility corridors, and similar uses compatible with agriculture” (Alameda County Board of Supervisors, Resolution No. R-2021-91). Similarly, the San Francisco Public Utilities Commission announced in March 2021, that it is has agreements to provide power from its first consolidated solar and battery storage sources, including Maverick Solar 6, Crow Creek Solar and Aramis Solar.

**3. The use, if permitted, under all the circumstances and conditions of the particular case, will not materially affect adversely the health or safety of persons residing or working in the vicinity, or be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood**

The proposed Project would include multiple self-contained, pre-fabricated enclosure units housing lithium-ion batteries stored on racking. The lithium-ion technology is considered one of the safest, most easily understood, and most efficient methods of energy storage on the market. The proposed facility would use lithium-ion technology that has a long lifespan and boasts superior safety and stability characteristics. All enclosure units would have a fire rating in conformance with local fire authority and County of Alameda standards (see attached project description for further details concerning health and safety of the proposed Project elements and the decommissioning process for the proposed Project).

**4. The use will not be contrary to the character or performance standards established for the District in which it is to be located**

Battery storage does not impede or interfere with other land uses in the ECAP. Installing and implementing battery storage to support reliability in California’s energy grid is mandated through CPUC’s orders concerning battery storage procurement targets, as described above. Furthermore, battery storage is wholly compatible with the LPA designation, which allows large-scale utility uses as evidenced in the approved Aramis project. The design of the proposed project would be consistent with the character of other utilities in the area, including the adjacent windfarms and the PG&E Tesla Substation. The proposed Project will meet applicable performance standards relating to buffers,

setbacks and other screening techniques. The facility will be operated remotely and will not generate significant amounts of vehicle traffic in the project area. It will have a low profile and will not cause significant visual impacts. The proposed Project includes a decommissioning plan for removal of the Project facilities and the return of the site to pre-project conditions.

**Project Description**  
**Kola Energy Storage Project**  
**Conditional Use Permit Application**

**PROJECT DESCRIPTION**  
**KOLA ENERGY STORAGE PROJECT**  
**ALAMEDA COUNTY, CALIFORNIA**

**PREPARED FOR:**

**Kola Energy Storage, LLC**  
700 Universe Boulevard  
Juno Beach, FL 33408

PREPARED BY:  
JACOBS ENGINEERING

September 14, 2021





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## ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
Applicant	Kola Energy Storage, LLC
BESS	battery energy storage system
CPUC	California Public Utilities Commission
ECAP	East County Area Plan
FPDC	Fleet Performance and Diagnostics Center
gen-tie line	generation tie line
HVAC	heating, ventilation, and air conditioning
I-580/I-205	Interstate 580/Interstate 205
Project	Kola Energy Storage Project
SB	Senate Bill
PG&E	Pacific Gas and Electric
RPS	Renewable Portfolio Standard

## 1.0 SUMMARY

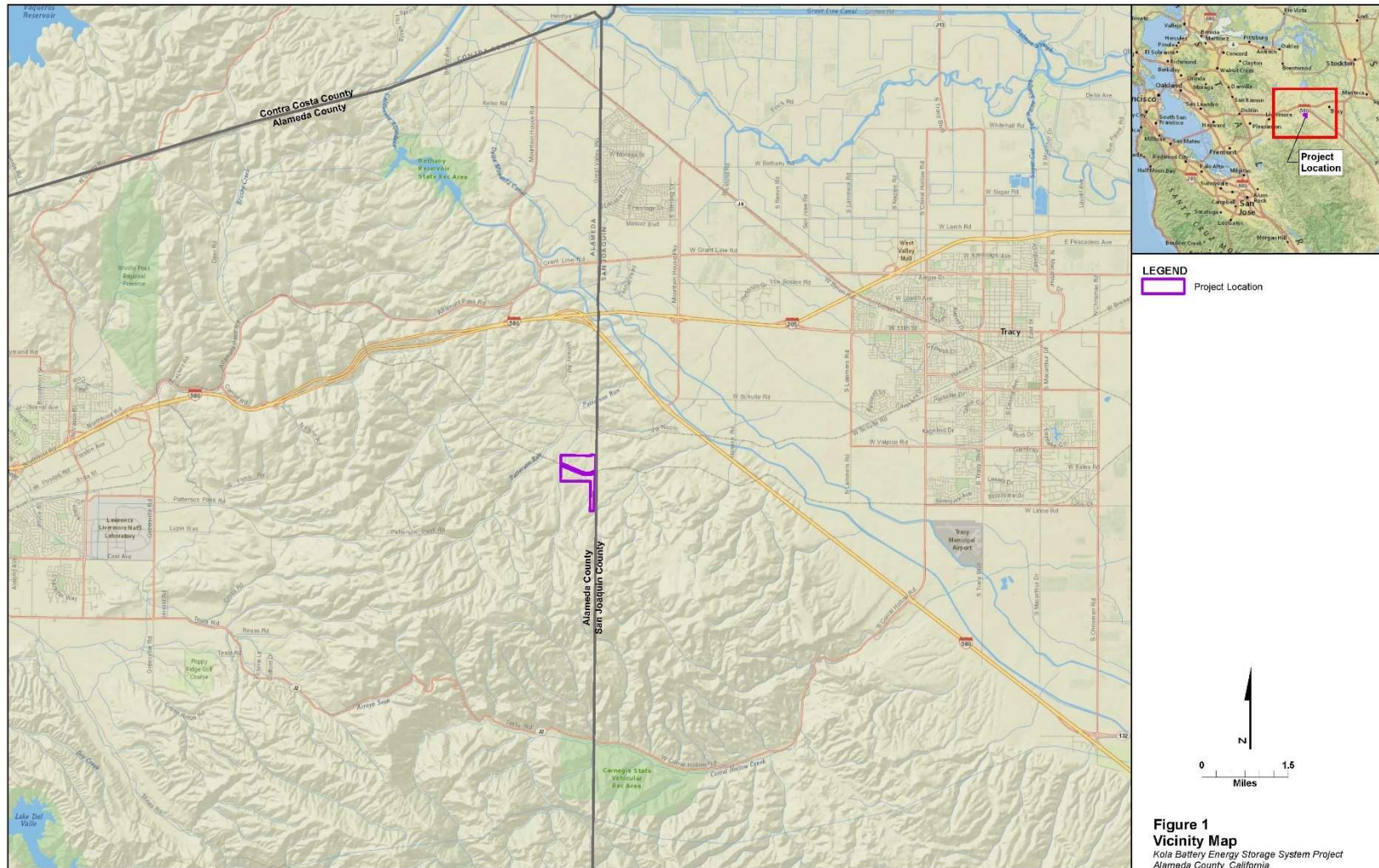
Kola Energy Storage, LLC (Applicant), a wholly-owned, indirect subsidiary of NextEra Energy Resources, LLC (NextEra), proposes to construct and operate the Kola Energy Storage Project (Project), a two-phased Battery Energy Storage System (BESS) in the Altamont Pass Wind Resource Area located in Alameda County. Phase 1 includes a 400-megawatt BESS, with an anticipated second phase adding an additional 300 MW (700 MW total). The Project site is located within Alameda County's East County Area Plan, encompassing three Assessor's parcels and a total of approximately 210 acres. Phase 1 would encompass approximately 30-50 acres and includes the BESS with the associated on-site switchyard, inverters, fencing, a driveway providing site access, and supervisory control and data acquisition system. The Project also includes a 230-kilovolt overhead generation tie line (gen-tie line), which would extend to the adjacent Pacific Gas and Electric (PG&E) Tesla Substation.

The proposed Project will support state and local policies necessary to improve the reliability of California's energy grid. California has taken action to advance energy storage, including the passage of Assembly Bill 2514 and the resulting California Public Utilities Commission (CPUC) decision for energy storage procurement targets for each of the investor-owned utilities. In addition, the state of California has taken action through the Governor's Emergency Proclamation issued July 2021 to expedite permitting of clean energy projects in an effort to prevent future emergency shortfall. Alameda County locally provides a large share of the region's renewable energy and is growing the amount of power available to the grid that can be stored for increased reliability. In addition, the East County Area Plan (ECAP) Utilities Policy 285 specifies that the, "County shall facilitate the provision of adequate gas and electric service and facilities to serve existing and future needs while minimizing noise, electromagnetic, and visual impacts on existing and future residents". The Kola Energy Storage Project would substantially increase local battery storage capacity and address the limitations of the electric grid and the increasing demand for renewable energy. The proposed Project and other BESS projects are used to supply power during brief disturbances, reducing outages and associated impacts to the community, and substitute certain large footprint transmission and distribution upgrades. Overall, layering BESS facilities into the energy grid improves the reliability of the grid and makes it more resilient to disturbances and peaks in energy demand.

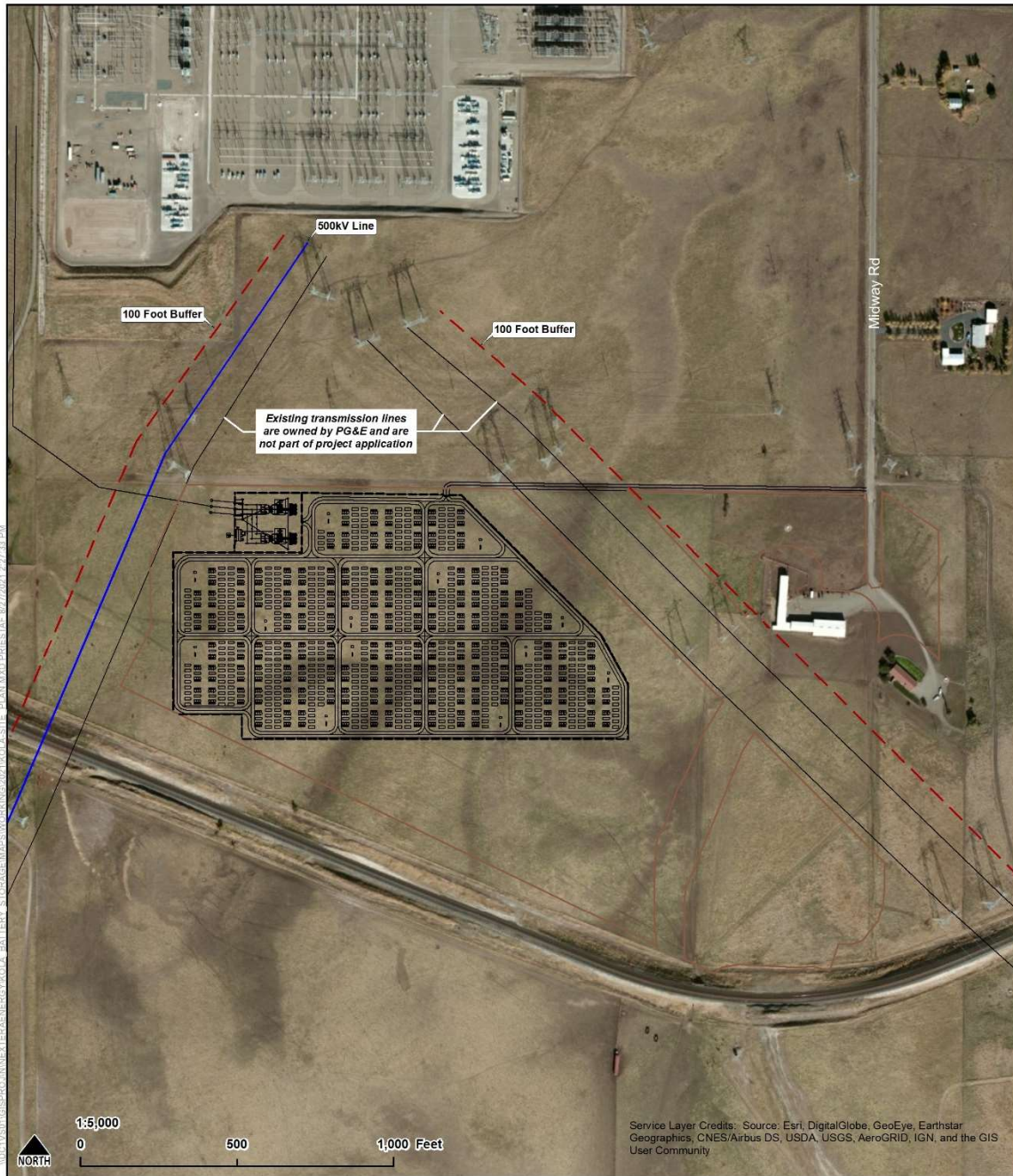
The following description has been prepared to provide an overview of the facilities that are proposed to be constructed and operated for the Project.

## 2.0 LOCATION

The Project site is situated roughly in the southwest corner of Section 5, Township 3 South, Range 4 East, of the Midway, California, U.S. Geological Survey 7.5-Minute Topographic Quadrangle at approximately 121°33'43.907"W 37°42'20.237"N. The Project is located approximately four miles southwest of the center of City of Mountain House, and approximately one mile southwest of the Interstate 580/Interstate 205 (I-580/I-205) interchange (Figure 1, Vicinity Map). The Project will be located adjacent to the Tesla Substation (Figure 2, Preliminary Site Plan – Phase 1). The property location address is 17950 Midway Road, Tracy, California and encompasses approximately 210 acres. The proposed Project site includes Assessor's Parcel Numbers 099B-7950-001-03, 099B-7950-001-04, and 099B-7950-003-00.



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- LEGEND**
- Fence
  - Property Line
  - 500kV Line
  - - - 100 Foot Buffer

**NOTES:**  
 LAYOUT IS CONCEPTUAL AND IS SUBJECT TO CHANGE BASED ON ADDITIONAL ENVIRONMENTAL DILIGENCE, TECHNOLOGICAL SELECTIONS, ENGINEERING, AND CIVIL SETBACK DISTANCES. ORIENTATION, FENCE DIMENSIONS, AND GRADING LIMITS OF DISTURBANCE FOR THE SWITCHYARD AND NEER SUBSTATION ARE SUBJECT TO CHANGE AND COULD VARY SIGNIFICANTLY IN FINAL DESIGN.

**Figure 2**  
**Preliminary Site Plan**  
 NextEra Energy Resources, LLC  
 Kola BESS Project  
 Alameda County, California

**Jacobs**

### 3.0 PROJECT SETTING

The proposed project site (APN 099B-7950-001-03, 001-04, and 000-300) is located in unincorporated eastern Alameda County, southwest of I-580, west of the City of Tracy, and south/southeast of Patterson Pass Road. The proposed Project site's eastern border is located on the San Joaquin County line and the site is surrounded by undeveloped rangeland, with the PG&E 70-acre 500 kilovolt Tesla Substation located approximately 500 feet north of the site. The property is bisected by a Union Pacific Railroad right of way containing two sets of railroad tracks running east to west. Midway Road runs north to south and terminates at the railroad tracks within the proposed Project site. Currently, the proposed project site is used as low-intensity cattle pasture, with barn and shed structures, fenced corrals, and the landowners' residence.

Site elevations range from 389 feet to 632 feet, with lower elevations to the north, and higher elevations to the south. California annual grassland is the primary habitat type, comprised of the typical non-native grassland species widely known from the region (e.g., wild oat, bromes, etc.). A few landscape and shade trees are located near the residence and barn structures on the northern quarter of the property. A large rectangular concrete culvert/cattle underpass beneath the railroad tracks provides connectivity between the northern and southern portions of the site, bisected by the railroad tracks. There are a few small rock outcrops on a gently sloping north-south trending ridge, south of the railroad. A large concrete water tank and a railroad box car are located south of the railroad.

The area is zoned as "Measure D" for large parcel agriculture and designated as Large Parcel Agriculture within the Wind Resource Area under the Alameda County's East County Area Plan (ECAP). Surrounding land uses include several high-voltage transmission lines, nearby wind farms, agriculture and single building residential homes affiliated with agricultural uses.

There are multiple existing unpaved access roads throughout the site that were in use when the site was an active windfarm. The site can be accessed using Midway Road, which connects to West Patterson Pass Road to the north, and ultimately the I-580.

## 4.0 PROJECT CHARACTERISTICS

The proposed Project is designed to absorb or output approximately 700 megawatts (400 MW in Phase 1) of electricity within the BESS, and will consist of a 230-kilovolt overhead generation tie line (gen-tie line) which would extend to the PG&E Tesla Substation. Additionally, other components of the Project include an on-site switchyard, inverters, fencing, a driveway/access road from Midway Road, a supervisory control and data acquisition system, and other ancillary facilities or equipment.

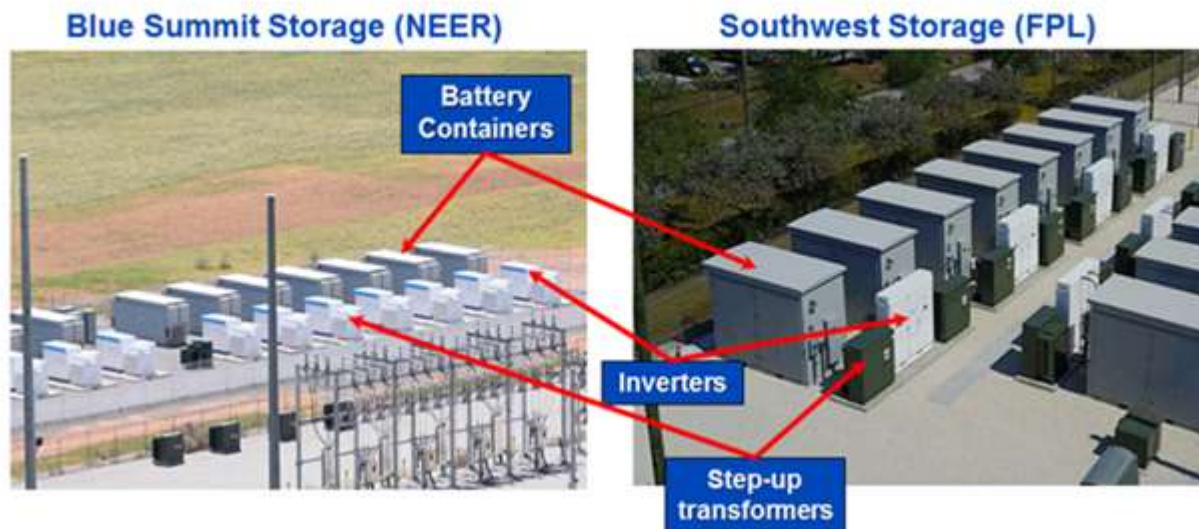
### 4.1 Battery Energy Storage System

The proposed Project would include multiple modular, prefabricated enclosures in a parallel configuration. There would be no internal open space available for entry or occupation, and all battery racking must be accessed from the exterior of the enclosure via external doors (Figure 3, Examples of Storage Units) similar to telecom cabinetry for the purpose of protecting equipment. Lithium-ion technology is considered one of the safest, most easily understood, and most efficient methods of energy storage on the market. The proposed Project would use lithium-ion technology that has a long lifespan and boasts superior safety and stability characteristics. Each enclosure would have a fire rating in conformance with local fire authority and County of Alameda standards. The proposed Project would be unmanned, and operational control would be performed off-site. Operational staff would also perform periodic inspections and maintenance as necessary.

The proposed Project will utilize designs and equipment that have undergone UL-9540A testing, and all other UL and NFPA standards that are applicable. In addition, the Applicant will provide training to local fire officials and first responders prior to commencing operation at our battery storage facilities.

In addition to fire suppression improvements, only batteries that are UL certified and that include built-in fail safes designed specifically to prevent thermal runaway and the spread of fire would be used. To the extent required by state and local fire code, a smoke detection and fire suppression system would be installed, which would not only suppress a fire but also automatically shut down other batteries if smoke or fire is detected.





**Figure 3**  
Typical Battery Storage Units

## 4.2 On-Site Switchyard

Underground or overhead collector lines would transmit energy to and from an on-site switchyard and the BESS. Inverters located adjacent to the enclosures would invert and step up the voltage of electricity to 230 kilovolts for transmission to the substation or invert from alternating current to direct current for storage in the BESS. Additionally, the proposed switchyard would host the grid intertie safety equipment and switches required to interconnect to the high-voltage transmission system. The switchyard would include switchgear and additional electrical equipment, as required by PG&E specifications. The associated transformers and switchgear would be located adjacent to the enclosures or structure on concrete pads.

Underground wires and cabling would run from the battery cable collection box (inside the structure or from enclosures) to a concrete pad housing the electrical equipment mentioned previously. All outside electrical equipment would be housed in the appropriate National Electrical Manufacturers Association-rated enclosures and screened from view on all sides.

### Inverters

The Project would only use industry standard, nationally (and internationally) recognized equipment. These inverters are unattended, standalone units that operate in all conditions. They operate in charge and discharge modes, are UL listed for bidirectional use, and are monitored and controlled remotely. There would be on-site disconnects in case of an emergency or unscheduled maintenance. In case of grid disturbance on PG&E's side, the inverters would not operate until they are remotely turned on, or the grid instability is stabilized for a length of time. In discharge mode, they are turned on remotely and controlled by internal

circuitry and power control software at the BESS. They are robust in their design and are designed to last more than 30 years.

Remote monitoring would be provided by NextEra's Fleet Performance and Diagnostics Center (FPDC). The FPDC provides world-class remote operating, monitoring, and diagnostic services for thermal, solar, secondary nuclear, wind, and energy storage assets. For energy storage support, the FPDC provides around-the-clock operational monitoring, diagnostics, and management of alarms as established by the Power Generation Division engineering and operation teams. The FPDC operators are uniquely trained to interact closely with other Power Generation Division engineering teams as needed to achieve resolution of operational issues in a timely manner and with a high level of process discipline using quality tools.

### **4.3 Generation Transmission Line**

The energy is transported from the on-site switchyard to PG&E's substation through a gen-tie transmission line. At this time, potential routes are being reviewed for the gen-tie line.

Regardless of the gen-tie line route that is ultimately selected, the 230-kilovolt gen-tie transmission line would include concrete or steel pole structures up to 150 feet tall and spaced approximately every 500 feet. The poles would carry one conductor per phase and allow the line to maintain a minimum 30-foot vertical clearance to the ground. The number and height of the poles, as well as the type of conductor, will be finalized during detailed design. The right-of-way is expected to consist of a width of approximately 100 feet for the maintenance road and gen-tie line. Less width may be required for portions of the right-of-way where access to the transmission line is facilitated by existing roads.

### **4.4 Ancillary Facilities**

#### **Signage**

A small sign at the main entrance would be installed. The sign would be no larger than 8 feet by 4 feet and read "Kola Energy Storage." In addition, required safety signs to identify high voltage within the premises, as well as information for emergency services, would be installed on the fence near the entrance and at the gates.

#### **Perimeter Fence**

The perimeter of the Project site would be enclosed by a six-foot-tall chain-link fence topped with one foot of three-strand barbed wire. Access onto the Project site would be through a drive-through gate. The purpose of the fence would be to prevent unauthorized access to the site. The total height, above-grade, of the fence would be approximately seven feet.

#### **Lighting**

Low-elevation (<14-foot), controlled security lighting would be installed within the on-site switchyard. The lighting would only switch on when personnel enter the area (through either motion-sensor or

manual activation [switch]). All safety and emergency services signs would be lit when the lights are on. The lighting would be shielded so the light is directed downward. Electrical power to supply the access gate and lighting would be obtained from PG&E. Lighting would be only in areas where it is required for safety, security, or operations. All lighting would be directed on site and would include shielding as necessary to minimize illumination of the night sky or potential impacts to surrounding viewers.

## 5.0 CONSTRUCTION

### Schedule

This Project is anticipated to be built over an approximately 13-month timeframe from the onset of perimeter fence installation through testing and commissioning of the BESS. It is anticipated that the work would be completed in 8- or 10-hour shifts, with a total of five shifts per week (Monday–Friday). Overtime and weekend work would be used only as necessary to meet scheduled milestones or accelerate schedule and would comply with applicable California labor laws and applicable Alameda County ordinances pertaining to noise, lighting, etc.

### Traffic

Delivery of material and supplies would reach the site through on-road truck delivery through Interstate 580 to Patterson Pass Road. The majority of the truck deliveries would be for the battery enclosures, inverters, transformers installation, as well as any aggregate material that may be required for foundations. These loads would typically be limited to 40 tons, or 80,000 pounds, with a typical cargo load of approximately 25 tons, or 50,000 pounds. Typically, the rock is delivered in “bottom dump trucks” or “transfer trucks” with six axles. Low-bed transport trucks would transport the construction equipment to the site as needed. The size of the low-bed trucks (axles for weight distribution) would depend on the equipment transported. The heaviest delivery loads to the site would be for the step-up transformer, which may be close to 160,000 pounds.

## 6.0 CONSTRUCTION ACTIVITIES

Although the Project site is fairly level, grading would be required, especially for the construction of the on-site switchyard, the battery enclosures, and inverter pads. This would be accomplished with scrapers, graders, water trucks, dozers, and compaction equipment. The enclosure modules would be off-loaded and installed using cranes, boom trucks, forklifts, rubber-tired loaders, rubber-tired backhoes, and other small- to medium-sized construction equipment, as needed. Construction equipment would be delivered to the site on low-bed trucks unless the equipment can be driven to the site (e.g., boom trucks).

Vegetation on the site would be modified only where necessary. Vegetation would be removed where gravel roads would be constructed, where fill would be placed from grading operations, where battery enclosures are to be constructed, and where gen-tie poles would be installed. At locations where gen-tie poles would be installed, minor cuts may be required where the foundation would be driven. Minor earthwork would also occur to install aggregate base access roads. The surface of the roads would be at-grade to allow water to sheet flow across the site as it currently does. Throughout the remainder of the developed area on the site, the vegetation root mass would generally be left in place to help maintain existing drainage patterns on a micro level and to assist in erosion control. During construction of the premises, it is expected that most of the vegetation would be cut, trimmed, or flattened as necessary but left otherwise undisturbed so that re-establishment is possible.

## 7.0 WATER USE

Water consumption during construction would be needed for dust suppression and earthwork. Construction and operational water would be provided by on-site groundwater through an improved existing well or a new well permitted and drilled (if necessary) or through off-site source delivered by truck. An on-site diesel generator may be used to power pumps for well water use during construction. In addition, during construction, water pumped directly into 2,000–4,000-gallon water trucks may be stored in overhead, approximately 12,000-gallon water storage towers/tanks (up to 16 feet tall) to assist in the availability of water for trucks and to expedite filling. Any existing wells on site that would not be used for the Project would be capped in place in accordance with Alameda County requirements.

## **8.0 OPERATION AND MAINTENANCE**

The proposed Project would be unmanned, and operational control would be from an off-site control room through the supervisory control and data acquisition system. Operational staff would also perform periodic inspections and maintenance as necessary.

## 9.0 DECOMMISSIONING

The proposed Project, including the BESS and on-site switchyard, would be recycled when the Project's life is over. Most parts of the proposed system are recyclable. Batteries include lithium-ion, which degrades but can be recycled or repurposed. Battery enclosures include steel or aluminum, with concrete foundations. All of these materials can be recycled. Local recyclers are available, and metal and scrap equipment and parts that do not have free-flowing oil may be sent for salvage.

Fuel, hydraulic fluids, and oils would be transferred directly to a tanker truck from the respective tanks and vessels. Storage tanks and vessels would be rinsed and transferred to tanker trucks. Other items that are not feasible to remove at the point of generation, such as lubricants, paints, and solvents, would be kept in a locked utility structure with integral secondary containment that meets applicable requirements for hazardous waste storage until removal for proper disposal and recycling. It is anticipated that all oils and batteries would be recycled at an appropriate facility. Site personnel involved in handling these materials would be trained to properly handle them. Enclosures used to store hazardous materials would be inspected regularly for any signs of failure or leakage. Transportation of the removed hazardous materials would comply with applicable regulations for transporting hazardous materials, including those set by the U.S. Department of Transportation, U.S. Environmental Protection Agency, California Department of Toxic Substances Control, California Highway Patrol, and California State Fire Marshal.

Upon removal of the Project components, the site would be left generally consistent with the existing (pre-development) conditions.



## 10.0 EXISTING REGULATORY REQUIREMENTS

The proposed Project would be required to comply with all applicable regulatory provisions, including but not limited to the following:

- Alameda County Building Code, including:
  - 2019 California Building Code
  - 2019 California Mechanical Code
  - California Plumbing Code
  - 2019 California Electrical Code
  - California Energy Code
  - California Green Building Standards Code
- 2019 California Fire Code
- Alameda County Municipal Code and Zoning Ordinance
- County of Alameda Fire Department requirements

## 11.0 PURPOSE AND NEED

At the local level, draft solar policies for Alameda County and the East County Area Plan are defined in the October 19, 2020 memorandum to the Board of Supervisors' Transportation/Planning Committee. Included in those solar policies is Policy 2, which states, "the County shall support the State of California's efforts to fulfill the Renewable Portfolio Standard".

California has been at the forefront for transitioning to sustainable, renewable energy sources. The state has seen significant growth in renewable energy in the past several years, particularly with solar installations more than doubling in recent years. Senate Bill 100 requires that the California achieves a Renewable Portfolio Standard target of 44% by 2024, 52% by 2027, 60% by 2030, and 100% by 2045. This ambitious build-out of renewable but intermittent resources such as wind and solar requires an accompanying portfolio of resources and contract provisions that provide operational flexibility to quickly change electricity production and consumption and maintain needed output levels at the time required. Energy storage resources are flexible resources and, therefore, are beneficial toward enabling reliable, low-carbon grid operations.

The state has taken action to advance energy storage, including the passage of Assembly Bill 2514 and the resulting CPUC decision for energy storage procurement targets for each of the investor-owned utilities, totaling 1,325 megawatts to be completed by the end of 2020 and implemented by 2024. The CPUC's orders detailing the state's critical need for energy storage are described below.

- Decision Requiring Electric System Reliability Procurement for 2021 – 2023 (Decision 19-11-016): The CPUC found that the need for system resource adequacy and renewable integration resources began in 2021 and will continue through at least 2023, as more renewable resources are added to the grid to meet California's climate action goals and fossil fuel and nuclear power plants are retired.
- Decision Establishing Process for Backstop Procurement Required by Decision 19-11-016 (Rulemaking R.20-05-003): Based on analysis conducted by CPUC staff, this ruling defines the need for electric system reliability between 2024 and 2026. CPUC defined a need for 7,410 MW of effective capacity additions by 2026. When added to the 3,300 MW of effective capacity already required by CPUC's decision D.19-11-016 (described above), the total closely approximates CPUC's plan to meet energy reliability needs by 2026.

On July 30, 2021, the Governor of California issued an Emergency Proclamation to expedite clean energy projects and relieve demand on the electrical grid in the face of extreme climate impacts across the West that threaten the state's energy supply and limit the state's ability to import additional energy. The proclamation includes actions to accelerate the state's transition to clean electricity by streamlining permitting and other processes to bring new resources on-line as fast as possible, particularly battery storage projects to capture abundant renewable generation available during the day. The proclamation allows greater energy production and creates incentives for back-up power generation (including battery storage), freeing up energy capacity on the grid during critical times when extreme heat events

or the interruption of transmission lines from wildfires or other causes threaten energy supply during high demand periods.

Battery storage is a rapidly growing technology that has experienced significant growth in the last decade. The initial driver for this technology has been electric vehicles. However, larger stationary battery storage systems are becoming more common. The need to store energy for use at peak times, improve reliability, and enhance the dispatching of electricity contribute to the need for more battery storage. Currently, there are several large battery energy storage systems located throughout California, with many more slated for construction.

Battery energy storage systems are critical for meeting California's renewable portfolio standards. In addition to helping the nation, state, and utilities meet their renewable energy goals, the Project would provide substantial economic benefits. Specifically, the Project would create substantial economic activity from the construction of the Project, including a significant number of construction jobs, increased tax base, and an increase in local business activity. Renewable energy providers, such as East Bay Community Energy, are actively searching for long-term energy and storage projects needed to meet their RPS and Integrated Resource Plan (IRP) obligations under SB 350 and SB 100. While Alameda County is already incorporating intermittent resources such as wind and solar to support California's energy grid, an accompanying portfolio of resources that provide operational resiliency is needed to maintain electrical supplies at the time required. Meeting the state's reliable, low-carbon grid operational needs will require a combination of renewable resources as well as battery energy storage systems like the proposed Project.