



LAND USE COMMISSION  
STATE OF HAWAII

2014 NOV 26 A 7:15

BEFORE THE LAND USE COMMISSION

OF THE STATE OF HAWAII

In The Matter Of The Petition Of

TOM GENTRY AND GENTRY-PACIFIC,  
LTD.

To Amend The Agricultural Land Use  
District Boundary Into The Urban Land  
Use District For Approximately 1,395  
Acres At Waiawa, `Ewa, O`ahu, State Of  
Hawai`i, Tax Map Key Nos.: 9-4-06:  
Portion Of 26; 9-6-04: Portion of 1 And  
Portion Of 16; And 9-6-05: Portion Of 1,  
Portion Of 7 And Portion Of 14

DOCKET NO. A87-610

ORDER GRANTING MOTION FOR  
ORDER AMENDING FINDINGS OF  
FACT, CONCLUSIONS OF LAW AND  
DECISION AND ORDER DATED MAY  
17, 1988 AND CERTIFICATE OF  
SERVICE

ORDER GRANTING MOTION FOR ORDER AMENDING FINDINGS OF FACT,  
CONCLUSIONS OF LAW AND DECISION AND ORDER DATED MAY 17, 1988

AND

CERTIFICATE OF SERVICE

THIS IS TO CERTIFY THAT THIS IS A TRUE AND CORRECT  
COPY OF THE DOCUMENT ON FILE IN THE OFFICE OF THE  
STATE LAND USE COMMISSION, HONOLULU, HAWAII.

Date November 26, 2014

BY  \_\_\_\_\_

Executive Officer



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Successor Petitioner JANEEN-ANN AHULANI OLDS, LANCE KEAWE  
WILHELM, ROBERT K.W.H. NOBRIGA, CORBETT AARON KAMOHAIKIOKALANI  
KALAMA, and MICAH A. KANE, as TRUSTEES OF THE ESTATE OF BERNICE  
PAUHI BISHOP, dba KAMEHAMEHA SCHOOLS ("KS" or "Petitioner") filed a  
Motion for Order Amending Findings of Fact, Conclusions of Law and Decision and  
Order Dated May 17, 1988, in Docket A87-610 (In the Matter of Tom Gentry and Gentry-  
Pacific, LTD.) ("Motion to Amend") on May 13, 2014. The Motion to Amend was filed

under Hawai`i Revised Statutes (“HRS”) chapter 205 and Hawai`i Administrative Rules (“HAR”) chapter 15-15, and sought amendments to the Findings of Fact, Conclusions of Law and Decision and Order filed by the Land Use Commission of the State of Hawai`i (“Commission”) on May 17, 1988, and as amended by Commission Order dated November 30, 1990 (the 1988 Decision and Order, as amended, shall hereinafter be referred to as the “Waiawa Order”). Specifically, KS asked that the Commission: (1) recognize KS, as the fee owner of the KS Property (as hereinafter defined), as the successor Petitioner to Tom Gentry and Gentry-Pacific, LTD; and (2) issue an order modifying the Waiawa Order to expressly authorize the use of portions of the KS Property for solar farm development for an interim period not to exceed 35 years. As the term is used herein, the “KS Property” or “Petition Area” consists of approximately 1,395 acres of land situated at Waiawa and Waipi`o, `Ewa, O`ahu, Hawai`i, currently designated by Tax Map Keys (“TMKs”): 9-4-06:34 (por.), 35 (por.), 36, 37 (por.); 9-6-04:24 (por.), 25, and 26; and 9-6-05:1 (por.).

The Commission, having examined the testimony, evidence, and arguments of counsel presented during the hearings, along with the pleadings filed herein, hereby makes the following findings of fact, conclusions of law, and decision and order:



## FINDINGS OF FACT

### BACKGROUND & PROCEDURAL MATTERS

1. Tom Gentry and Gentry-Pacific, LTD ("Gentry") filed a Petition for District Boundary Amendment with the Commission on April 21, 1987, and amendments to that Petition on May 14 and May 26, 1987.

2. At the time that the Commission approved the Petition, the KS Property was owned by KS and subject to a development agreement between Gentry and KS.

3. Gentry envisioned developing the KS Property as a master-planned community with a mixture of residential dwellings, parks, open space, two golf courses, commercial, and light industrial uses. The Gentry plan was sometimes referred to as the Waiawa Ridge Project.

4. Approximately 50 percent of the 7,906 proposed residential units were planned as retirement/leisure housing units for owner-occupants ages 55 and older.

5. Approximately 30 percent of the KS Property was planned for open space, including golf courses.

6. The Gentry plan was intended to be the first increment of a 2,500-acre master-planned residential community for Waiawa.

7. At the time of the Waiawa Order, Gentry proposed to develop the KS Property over a 12-year period.

8. The Commission received no requests to intervene in the Gentry proceedings.

9. The Commission granted the requested reclassification of the 1,395-acre KS Property from the State Land Use Agricultural District to the State Land Use Urban District by Findings of Fact, Conclusions of Law and Decision and Order filed May 17, 1988, subject to ten (10) conditions of approval.

10. On October 12, 1990, Gentry filed a Motion to Amend with the Commission, requesting modification of Condition No. 6 to allow Gentry to satisfy a certain State of Hawai'i Department of Transportation ("DOT") condition through participation in a regional program for transportation management.

11. The Commission granted the Motion to Amend by Order dated November 30, 1990.<sup>1</sup>

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<sup>1</sup> Condition No. 6, as amended, provides: (the 1990 amendment is shown by underscore)

6. Petitioner shall appoint and fund a transportation manager whose function is the formulation, use, and continuation of alternative transportation opportunities that would maximize the use of existing and proposed transportation systems. This will include construction and operation of a park and ride facility or other activities to encourage transit use or ridesharing. These activities and facilities shall be implemented on a schedule acceptable to and approved by the State Department of Transportation.

In the alternative, Petitioner may participate in a regional program for the transportation management with other developers and/or landowners. This program shall address the formulation, use and continuation of alternative transportation opportunities that would optimize the use of existing and proposed transportation systems.

12. In 1998, the Honolulu City Council, through Ordinance No. 98-01 (as amended by Ordinance No. 98-69), approved the rezoning of approximately 874 acres within the KS Property from Restricted Agriculture (AG-1) to Neighborhood Business District (B1), Community Business District (B2), Low Density Apartment District (A1), Industrial-Commercial Mixed Use District (IMX1), Residential (RS), and General Preservation (P-2).

13. In 2003, the Honolulu City Council, through Ordinance No. 03-01, rezoned 175.43 acres within the KS Property from Restricted Agriculture (AG-1) to Residential District (R-5), Low Density Apartment District (A-1), Medium Density Apartment District (A-2), and Preservation District (P-2).

14. Over time, Gentry revised downward the anticipated number of dwelling units from 7,906 units to 5,000 dwelling units within the KS Property, and entered into an agreement with A&B Waiawa, LLC, to form Waiawa Ridge Development LLC, which was a joint venture undertaken to develop the backbone infrastructure needed for the residential and golf course areas within the KS Property.

15. In the 2008 Annual Report to the Commission in this Docket, Gentry indicated that Waiawa Ridge Development LLC had secured construction financing for the Waiawa Ridge Project and ground breaking was scheduled for fall 2009.

16. Satisfaction of financing conditions proved difficult in the wake of the September 2008 worldwide financial crisis, and the process of returning the KS Property to KS' sole control began shortly thereafter. Full control returned to KS late in 2012.

17. Prior to filing the Motion to Amend with the Commission, KS met with representatives from Castle & Cooke Homes Hawai'i, Inc. ("Castle & Cooke"), to let them know about KS' intent to file the Motion to Amend.

18. On May 13, 2014, KS filed a Motion for Order Amending Findings of Fact, Conclusions of Law and Decision and Order Dated May 17, 1988; Memorandum in Support of Motion; Verification of Giorgio Caldarone; Affidavit of Jennifer A. Benck; Exhibits 1 through 18; and Certificate of Service, and further provided a cashier's check payable to the State of Hawai'i for \$1,000 for the filing fee and a full-sized map of the KS Property.

19. Said Motion to Amend was served on the State of Hawai'i Office of Planning ("OP"); the City and County of Honolulu ("C&C") Department of Planning and Permitting ("DPP"); Gentry-Pacific, LTD, as an original party to the 1988 district boundary amendment proceedings (Tom Gentry, another original party, passed away in 1998 and was not served); and all persons with a recorded interest in the KS Property.



20. In total, 18 individuals/entities were served with a copy of the Motion to Amend.

21. On June 9, 2014, KS, OP, and the DPP filed the First Stipulation of the Parties Setting Forth Filing Schedule for Motion to Amend in Docket No. A87-610.

22. On June 16, 2014, OP filed Office of Planning List of Witnesses; Office of Planning Response to Trustees of the Estate of Bernice Pauahi Bishop, DBA Kamehameha Schools Motion for Order Amending Findings of Fact, Conclusions of Law, and Decision and Order Dated May 17, 1988, Exhibits 1-6; and Certificate of Service.

23. On June 16, 2014, the DPP filed the Statement of Position of the Department of Planning and Permitting; Certificate of Service.

24. On June 16, 2014, KS filed Successor Petitioner's First List of Witnesses and Certificate of Service.

25. On June 20, 2014, OP filed Office of Planning List of Exhibits, Exhibits 7 and 8, and Certificate of Service.

26. On June 20, 2014, KS filed Successor Petitioner's First List of Exhibits, KS Exhibits 8 (Errata), KS Exhibits 19 - 34, Successor Petitioner's First List of Rebuttal Witnesses, and Certificate of Service.

27. On October 10, 2014, KS filed Successor Petitioner's List of Rebuttal Exhibits, KS Exhibits 35 - 39, Successor Petitioner's Supplemented List of Witnesses, and Certificate of Service.

28. On October 29, 2014, the Commission opened the evidentiary hearing in this Docket at the State Office Tower, Leiopapa A Kamehameha Building, Honolulu, Hawai'i. Entering appearances were Jennifer A. Lim, Esq., Carlsmith Ball LLP (formerly known as Jennifer A. Benck), and Giorgio Caldarone for KS; Deputy Corporation Counsel Richard D. Lewallen, Esq., and Matthew Higashida for the DPP; and Deputy Attorney General Bryan Yee, Esq., and Rodney Funakoshi for OP.

29. Commissioners McDonald, Wong, Aczon, Ahakuelo, Hiranaga, and Scheuer were in attendance.

30. The Commission heard public testimony from Dan Purcell.

31. Commissioner Scheuer disclosed that his wife is employed by Group 70 International, which is the same firm that employees Paul Matsuda, one of the witnesses identified by KS to present testimony. Commissioner Scheuer stated that his wife had no involvement in the matter before the Commission.

32. KS, the DPP, and OP acknowledged this disclosure and each stated that there were no objections to Commissioner Scheuer's participation in the matter under consideration.

33. Commissioner Ahakuelo disclosed that his mother-in-law is employed by KS, but that she had no involvement in the matter before the Commission.

34. KS, the DPP, and OP acknowledged this disclosure and each stated that there were no objections to Commissioner Ahakuelo's participation in the matter under consideration.

35. The Commission admitted into evidence: (a) KS Exhibits 1 through 7, KS Exhibit 8 (Errata), and KS Exhibits 9 through 39; and (b) OP's Exhibits 1-A, 1-B, and 2 through 8.

36. The DPP did not request that the Commission formally accept into evidence Attachment 1 to the Statement of Position of the Department of Planning and Permitting.

37. The DPP Attachment 1 is identical to KS Exhibit 25.

38. KS provided the oral testimonies of the following witnesses: Giorgio Caldarone; Tom Witten; Nicola Doss; Paul Matsuda; Chris Monahan, Ph.D.; Jason Alapaki Jeremiah; and Catherine Camp.

39. The DPP did not provide oral testimony.

40. OP provided the oral testimony of Rodney Funakoshi.

41. The Commission qualified Tom Witten; Nicola Doss; Paul Matsuda; Chris Monahan, Ph.D.; Jason Alapaki Jeremiah; and Rodney Funakoshi as expert witnesses in their designated fields.

42. On October 29, 2014, following the completion of the parties' respective cases-in-chief, the Commission closed the evidentiary portion of the proceedings.

43. On October 29, 2014, a motion was made and seconded to grant KS's motion to recognize KS as the successor Petitioner in this Docket with standing to seek the relief sought in the Motion to Amend. There being a vote tally of 6 ayes, 0 nays, and 1 excused, the motion carried.

44. On October 29, 2014, the Commission ordered the parties to file a stipulated proposed findings of fact, conclusions of law, and decision and order with the Commission on November 5, 2014.

45. On November 5, 2014, KS filed Successor Petitioner's Proposed Findings of Fact, Conclusions of Law, and Decision and Order. OP also filed its Comments to Proposed Stipulated Findings of Fact, Conclusions of Law, and Decision and Order.<sup>2</sup>

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<sup>2</sup> In its filing, OP stated that it was unable to complete a sufficiently thorough analysis of Petitioner's proposed Order by November 5, 2014, to reach a stipulation on a final Decision and Order. On



46. On November 13, 2014, the Commission met at the Honolulu International Airport, Airport Conference Center, Suite 700, Room #3 to conduct decision-making on the Motion to Amend. Following discussion on the findings of fact and conditions agreed to by the parties in their respective filings, a motion was made and seconded to grant the Motion to Amend and authorize the use of the identified portions of the KS property as a solar farm to include all related utility and other infrastructure for a period not to exceed 35 years from the date of this Decision and Order, and subject to the conditions imposed herein.

47. There being a vote tally of 6 ayes, 0 nays, and 1 abstention, the motion carried.

#### DESCRIPTION OF THE SUBJECT PROPERTY

48. The KS Property is located at Waiawa and Waipi`o, `Ewa, O`ahu, Hawai`i, and is designated by TMKs: 9-4-06:34 (por.), 35 (por.), 36, and 37 (por.); 9-6-04:24 (por.), 25, and 26; and 9-6-05:1 (por.).

49. The KS Property is east of the H-2 Freeway/Ka Uka Boulevard interchange and west of Pearl City.

50. Elevation of the KS Property ranges from approximately 100 feet to 600 feet above sea level.

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November 10, 2014, KS filed a Stipulation to Proposed Findings of Fact, Conclusions of Law, and Decision and Order with OP.

51. Elevations in the area proposed for Phase 1 ranges from about 660 feet mean sea level to approximately 400 feet. Elevations in the area proposed for Phase 2 ranges from approximately 520 feet to approximately 240 feet.

52. Access to the KS Property is from a driveway located on Waiawa Prison Road, which is along the northern edge of the KS Property, with regional connections to the H-2 Freeway via Ka Uka Boulevard and Mililani Cemetery Road, and also from a driveway located on Waihona Street, mauka of Kamehameha Highway, located at the southern portion of the KS Property.

53. The KS Property was historically used for sugarcane cultivation but has been fallow at least since 1983.

54. The KS Property is currently vacant and undeveloped.

55. The soils on the KS Property are almost all silty clay (Helemano Silty Clay, Lahaina Silty Clay, Leilehua Silty Clay, Mānana Silty Clay, Pa`aloa Silty Clay, Wahiawā Silty Clay) or silty clay loams (Mānana Silty Clay Loam, Moloka`i Silty Clay Loam).

56. The eastern boundary of the KS Property is bordered by Rock land. The KS Property contains small amounts of Fill land.

57. The State of Hawai'i Department of Agriculture's ("DOA") Agricultural Lands of Importance to the State of Hawai'i system classifies the majority of the KS Property as "Prime," with a smaller portion classified as "Other Important Agricultural Lands."

58. The Land Study Bureau rates most of the KS Property as "A," indicating the highest agricultural productivity and "B," indicating only minor limitations on agricultural productivity.

59. The U. S. Federal Emergency Management Agency Flood Insurance Rate Map shows the KS Property located in Flood Zone D, which is undetermined.

60. At the most southern point, the KS Property is less than one mile from both the planned Pearl Highlands rail transit station and the Leeward Community College station. The two stations are each less than two miles from the center of the KS Property.

#### DESCRIPTION OF THE SOLAR FARM

61. Anticipating the ultimate return of full control of the KS Property, in July 2011, KS issued a request for proposal to a group of experienced solar developers to solicit proposals to develop a utility-scale solar energy project. KS selected SunEdison to develop the solar farm on the Waiawa property.

62. KS is the sole landowner of the KS Property. However, KS will not be developing the solar farm. The solar farm project will be developed by a SunEdison entity.

63. SunEdison has been developing and operating renewable energy projects since 2003. To date, SunEdison has developed more than 1,000 megawatts ("MW") of solar energy capacity globally and delivered more than 4.2 million hours of electricity.

64. SunEdison has 47 offices located throughout North America, Europe, and Asia, and over 800 operational sites worldwide.

65. KS has entered into an Agreement to Grant Easement, which includes a form Easement Agreement for the solar farm site. The Easement Agreement will be executed at the start of construction. The Agreement to Grant Easement and Easement Agreement shall hereinafter be referred to collectively as the "Development Agreement."

66. Under the Development Agreement, once the Easement Agreement is executed, the easement areas will be restricted to solar farm uses for the term of the Easement Agreement.

67. Activities outside of the areas under the Easement Agreement will not be limited under the terms of the Development Agreement, except that any



structures that could cause shade to the PV array are limited, and KS would have to confer with SunEdison regarding any such structures.

68. Under the Development Agreement, SunEdison has the responsibility to obtain and comply with all permits required by the State of Hawai`i and the C&C.

69. The initial phase of the solar project is designed to produce 50 MW of power ("Phase 1"). The solar panels for Phase 1 will be installed within approximately 387 acres located in the northwest portion of the KS Property (the actual footprint of Phase 1 will be approximately 250 acres), identified as TMKs: 9-4-06: 34 (por.), 35 (por.), 36, and 37 (por.) and 9-6-04: 24 (por.), 25, and 26 .

70. The Development Agreement contemplates the possibility of a second phase, but it is not certain whether SunEdison will pursue the second phase of the solar farm.

71. The second phase of the solar farm, if pursued, will produce up to 65 MW of power ("Phase 2"). The solar panels for Phase 2 will be installed within an approximately 268-acre area in the southwest portion of the KS Property, identified as TMK: 9-6-04: 24 (por.).

72. SunEdison will likely subdivide the Phase 1 and Phase 2 areas to create separate lots or, more likely, easements.

73. The Phase 2 area could be smaller than 65 MW, depending upon what Hawaiian Electric Company (“HECO”) requires.

74. The actual footprint of the solar farm will vary depending upon existing topography and system design and layout.

75. The Phase 1 area generally slopes mauka to makai from elevations of 660 feet to approximately 400 feet. The Phase 2 area generally slopes mauka to makai from elevations of 520 feet to 240 feet.

76. Access to the utility easement areas will be provided over existing roads.

77. The operational term of the solar farm will run 20 to 30 years.

78. The extent of the proposed interim use of the KS Property will not exceed 35 years from the date of the Commission’s approval, which allows for 30 years of operation, and provides time for permitting, construction, and decommissioning.

79. Should KS wish to retain the solar farm longer than 35 years, KS will return to the Commission to seek approval.

80. The solar farm improvements may consist of substation(s), battery storage system(s), PV panels, pad mounted inverters and electrical equipment, and substations.

81. Anticipated improvements also include access driveways, perimeter fencing, security systems, drainage, and vegetation improvements.

82. It is not certain that battery storage will be included within the Phase 1 or Phase 2 areas.

83. No caretaker or security guard residence will be part of Phase 1 or Phase 2 of the solar project.

84. The improvements, such as the substation(s) and battery storage, would be located within the area noted as Utility Improvements on KS Ex 24.

85. The physical size of the substation for Phase 1 will be similar to those seen in residential neighborhoods. It is projected to be between 15 to 20 feet in height.

86. The solar farm will be constructed as a fixed tilt racking system.

87. After site grading, the photovoltaic modules will be mounted on pile-driven metal piers with limited concrete pads for the inverters, and will passively collect solar energy. The solar modules will use fixed-tilt racking, and therefore will not have any moving parts or bearings that will require lubricants or oil- filled transformers.

88. The rack system will be designed in accordance with the building permit structural requirements. They are designed to withstand hurricane-type winds.

89. The energy from the Phase 1 solar panels will likely be transported to a project substation and battery storage area, or areas, which will be sited within the Phase 1 easement area, close to the western side of the KS Property and approximately 1,000 feet from the H-2 freeway.

90. In no event will any substations or battery storage areas be installed within the Waiawa Shaft Zone of Contribution ("ZOC").

91. From the Utility Improvements area located within the Phase 1 easement, as shown on KS Ex. 24, the solar energy will most likely connect to existing 46kV transmission lines that run along the H-2 Freeway, across and within the KS Property.

92. The final connection points will be determined by HECO.

93. Energy from the Phase 2 solar panels may be transported to the project substation(s) and battery storage area(s) within the Phase 1 easement area, or similar improvements will be constructed within the Phase 2 easement area.

94. The PV modules are designed to absorb as much solar energy as possible, and therefore will create no glare.



95. The type of PV modules proposed for the solar farm reflect back approximately 1 ½ percent light, whereas typical window glass reflects approximately 4 percent light. The PV modules are less reflective than water.

96. SunEdison also manufactures PV panels and components used in the modules.

97. The entire construction period for Phase 1 could take approximately 12 months.

98. In Hawai`i, the costs of land development for solar projects are higher than elsewhere.

99. On an order of magnitude basis, the overall construction costs for Phase 1 of the solar farm are between \$150 to \$200 million. Phase 2 of the solar farm is estimated to cost upwards of between \$180 to \$200 million.

100. It is essential to put Phase 1 into commercial operations no later than the third quarter of 2016 in order to access and monetize the available 30 percent federal investment tax credits. The tax credits allow SunEdison to offer its power to HECO at the currently proposed low price.

101. If Phase 1 is delayed, the price that SunEdison will be able to offer to HECO for the power will need to increase by at least 20 percent to reflect the lowered federal tax credits of only 10 percent starting in 2017.

102. SunEdison anticipates that decommissioning activities will take approximately 12 months.

103. When decommissioning, SunEdison will completely remove the foundational piers and modules and all associated components. To the fullest extent possible, SunEdison will seek to recycle the metal components utilized in the solar farm. SunEdison will not dispose of any solar farm components in a Hawai'i landfill.

104. Under the Development Agreement, decommissioning security is put in place by SunEdison upon commercial operations of the facility such that if SunEdison and its financing partners default on the project and do not cooperate with the terms of decommissioning, KS may step in and draw on the decommissioning security to decommission the solar farm project.

105. An Interconnection Requirements Study for Phase 1 commenced under an Interconnection Requirements Study Letter Agreement between SunEdison and HECO, executed in October 2013. Initial feedback from HECO was that interconnection for the Phase 1 project is feasible, and requires re-conductoring of 2 to 4 miles of 46kV lines. Under a more recent analysis, HECO indicated an intention to

connect the Phase 1 project through two interconnections of 25 MW each. Under this scenario, re-conductoring line work is not needed.

106. The Interconnection Requirements Study is required to be part of the Power Purchase Agreement with HECO, which is scheduled to be submitted to the Public Utilities Commission ("PUC") in December.

107. The scope of interconnection upgrade work needed and associated performance and controls requirements arising out of the findings of the Interconnection Requirements Study will be incorporated into an Interconnection Agreement, which will be part of the Power Purchase Agreement between HECO and SunEdison.

108. The draft Interconnection Requirements Study is under review by SunEdison. The Interconnection Requirements Study is part of the ongoing negotiations between SunEdison and HECO.

109. The development and operation of the solar farm is consistent with the prior conditions of approval imposed under the Waiawa Order.

#### PETITIONER'S FINANCIAL CAPABILITY TO UNDERTAKE THE PROJECT

110. As a publicly traded company, SunEdison has audited annual financial statements available to the general public. The market capitalization of SunEdison is approximately \$5 billion. SunEdison has the development capital needed

to develop the solar farm project through to the start of construction and the access to construction financing funds in place to complete the project.

111. SunEdison and its affiliates have the necessary economic ability to carry out its representations and commitments relating to the solar farm.

STATE AND C&C PLANS AND PROGRAMS

112. The KS Property is currently designated in the State Land Use Urban District.

113. Solar farm development is fully consistent with the State Land Use Urban District and fully permissible in the Urban District.

114. The KS Property is designated for urban-type uses (e.g., residential, commercial, golf course, and industrial) under the Central O`ahu Sustainable Communities Plan land use map.

115. The KS Property is subject to a mixture of zoning by the C&C, including Neighborhood Business District (B1), Community Business District (B2), Low Density Apartment District (A1), Medium Density Apartment District (A-2), Industrial-Commercial Mixed Use District (IMX1), Residential District (RS), and General Preservation (P-2).



116. The KS Property is not located within the C&C's Special Management Area.

117. The solar farm project could not be developed on the KS Property if the KS Property was in the State Land Use Agricultural District.

118. The proposed solar farm is a "utility installation" as defined under the Honolulu Land Use Ordinance, Revised Ordinances of Honolulu, chapter 21. A "utility installation" is defined as "uses or structures, including all facilities, devices, equipment, or transmission lines, used directly in the distribution of utility services, such as water, gas, electricity, telecommunications other than broadcasting antennas, and refuse collection other than facilities included under waste disposal and processing." Utility installations also include accessory uses and structures directly associated with the distribution of the utility service.

119. The proposed solar farm falls under the category of Utility Installation, Type B, which is a permitted use within any zoning district, subject to approval of a Conditional Use Permit-Minor by the DPP.

#### NEED FOR THE PROPOSED DEVELOPMENT

120. KS has evolved since the 1980s when the Waiawa Ridge Project was first envisioned, and KS has an obligation to evaluate uses of the KS Property in a way that is consistent with its mission and obligations to beneficiaries. As a perpetual



charitable trust, KS must be particularly cautious about taking any actions that may reduce its limited trust assets.

121. Allowing the use of portions of the KS Property for the solar farm project will allow KS to receive a financial return on the KS Property, which is essential for promoting KS' education mission, which currently provides education for more than 47,000 learners and caregivers annually.

122. Making use of this vacant KS Property will provide financial support to KS, which spent over \$360 million in fiscal year 2012/2013 on educational programs, services, and support.

123. KS represents that using portions of the KS Property for a solar farm project will provide KS with the time and opportunity to assess potential development options for the entire KS Property.

124. KS believes that the Waiawa Ridge Project (i.e., the Gentry plan), which was conceptualized over 25 year ago, needs to be re-assessed to be more reflective of current market conditions and other changes.

125. KS represents that the jobs and revenues projected to result from the Waiawa Ridge Project within the KS Property are likely not realistic in the current environment.

126. Market demand for the commercial-industrial zoned areas within the KS Property is not high.

127. There are significant infrastructure challenges to developing the Gentry plan, such as building a land bridge across Pānakauahi Gulch.

128. No estimated costs were provided, but it is assumed that building a land bridge across Pānakauahi Gulch, as envisioned by the Gentry Plan, is a challenge because it requires a large upfront investment.

129. KS has no immediate plans to construct the land bridge, and intends to analyze creating access from the south of the KS Property, which would not require construction of the land bridge.

130. The Waiawa portion of the Koa Ridge development planned by Castle & Cooke is adjacent to the KS Property.

131. The Commission previously found, under Docket No. A11-793, that the development of certain infrastructure, including the land bridge, contemplated as part of the Waiawa Ridge Project is integral to the Commission's incremental districting of the Castle & Cooke Waiawa project as proposed, and that the Castle & Cooke incremental redistricting requires Castle & Cooke to have an executed cost-sharing agreement for all shared infrastructure between Castle & Cooke and the developer of this Petition Area by 2032.

132. At this time, KS has no plans to build the land bridge, and is not in discussions with Castle & Cooke for a cost-sharing agreement for traffic improvements.

133. Rather than letting the land remain vacant and unproductive during this re-assessment, KS sought out solar development within a portion of the KS Property as a means of making good use of the land in a manner that benefits the State and that has minimal to no adverse environmental impacts. KS has no immediate plans to develop the KS Property. Therefore, the development of the solar farm project is not preventing or delaying the development of the KS Property.

134. Solar farms uses are not incompatible with other urban-type development. The solar farm development will not preclude KS from pursuing other development options on the remainder of the KS Property.

135. Given the length of inactivity in the Petition Area, the importance of the land bridge and infrastructure cost-sharing agreement to the incremental districting in Docket No. A11-793, and the plan changes necessitated by the 35-year use of approximately 655 acres for solar farms, OP believes Petitioner needs to move forward with its planning for the Petition Area.

136. Petitioner is willing to accept a condition requiring the submission of a Master Plan and schedule for development of the Petition Area within five years of this Order.

## ECONOMIC IMPACTS

137. It is anticipated that the energy generated from Phase 1 of the solar farm will be enough to power approximately 9,800 homes each year for the term of the project, which will result in a savings of approximately \$145 million in electrical costs for the term of the project.

138. It is anticipated that the energy generated from Phase 2 of the solar farm, if pursued, will be enough to power approximately 12,740 homes each year for the term of the project, which will result in a savings of approximately \$188 million in electrical costs for the term of the project.

139. The savings in electrical costs are estimates based on current avoided costs of power generation versus the average cost of energy proposed by waiver projects collectively, and may vary with the price of fuel over time.

140. Development of the solar farm is not anticipated to generate significant changes in employment. During some portion of the construction period, there will be approximately 150 workers onsite.

141. Site work for Phase 1 of the solar farm is expected to take approximately 12 to 18 months.



142. Employment estimates have not been determined for Phase 2, but because Phase 2 is substantially larger than Phase 1, it is anticipated that the employment figures may be higher.

143. Once construction is complete, the solar farm will require minimal security personnel and a few workers for operation and maintenance purposes.

### SOCIAL IMPACTS

144. To fulfill its educational mission, KS must engage in a strategic planning process to address its educational goals and financial support for those goals. Strategic plans are prepared to set KS' course for the future. The Strategic Plan sets the overall goals for KS with respect to its educational mission, identifies issues, formulates strategies for addressing those issues, and results in goals and priorities to be pursued by KS.

145. The current plan, Kamehameha Schools Strategic Plan 2000 - 2015, is coming to a close, and KS has recently embarked on an organizational- wide Strategic Planning Processes for the 2015-2040 time horizon.

146. For the current Strategic Plan update, KS has orchestrated over 100 internal and external input-gathering sessions statewide.

147. Future uses of the KS Property will have to be evaluated against the goals and priorities to be set forth in the 2015 - 2040 Strategic Plan.



148. In addition to the 2015 - 2040 Strategic Plan process, KS is embarking on a regional planning effort for various regions, including the Waiawa area. The regional planning effort will look at how learning opportunities can be established in conjunction with commercial development. KS will work with community members, educators, and beneficiaries to define specific goals and objectives to guide decision-making.

149. Preliminary ideas for the KS Property under such a concept include land stewardship opportunities (ʻāina-based learning) and collaborations with Leeward Community College. This will involve extensive community outreach programs with stakeholders in the community. Incorporating such educational opportunities necessarily means identifying appropriate development options for the KS Property. Among the matters to be assessed with the stakeholders is a reexamination of how the southern portion of the KS Property could be developed to embrace transit-oriented development. The Waiawa Ridge Project envisioned by Gentry did not lead with education first.

150. Petitioner is preparing a Master Plan for the Petition Area, and anticipates that substantial changes may be made to the original Waiawa Ridge Project proposal. If substantial changes are made, Petitioner represented that it will return to the Commission through a motion to amend that examines the new uses and impacts

and to amend the original Waiawa Order and to possibly add or change the original conditions.

151. Consistent with KS' educational mission, the Development Agreement between KS and SunEdison calls on SunEdison to cooperate with KS in supporting various educational programs during the term of the solar farm project. This may include supporting internships, coordination of opportunities for hands-on experience in biological monitoring or mitigation activities, meteorological data analysis, or student-facilitated tours of the solar farm site, including providing students access to non-proprietary and public data to support classroom/student projects.

152. SunEdison may offer presentations on the technical, environmental, logistic, and economic aspects of commercial solar energy generation. The final determination of the educational program(s) to be offered will be determined by KS and SunEdison.

#### IMPACTS UPON RESOURCES OF THE AREA

153. A Final Environmental Impact Statement for the originally proposed "Waiawa Development" within the KS Property was accepted by the C&C Department of General Planning (now known as the DPP) on March 6, 1987.

154. The DPP determined that the proposed solar farm does not trigger the requirements to prepare an Environmental Assessment under HRS chapter 343.

155. KS anticipates that prior to embarking on a new development proposal for the KS Property, an Environmental Assessment or Environmental Impact Statement will likely be needed.

156. Development of the proposed solar farm is not anticipated to generate significant environmental impacts. The conditions proposed by OP are intended to address the limited impacts that are anticipated.

#### AGRICULTURAL RESOURCES

157. The KS Property was previously used for sugarcane cultivation by the O`ahu Sugar Company, and as pasture for cattle grazing.

158. The cane fields were fallowed when operations became economically infeasible due to the high cost of pumping irrigation water, the overall high cost of production, and the distance between the KS Property and the sugar mill.

159. The KS Property was placed into the State Land Use Urban District in 1988.

160. The KS Property is presently vacant and except for internal cane haul roads, it is essentially undeveloped.

161. No agricultural activities have taken place on the KS Property since 1983.

162. The KS Property is not used for grazing.

163. Development of the solar farm will have no effect on agricultural production in light of the fact that no portion of the KS Property has been used for agricultural production in over 30 years.

164. The DOA has no objections to the solar farm. However, the DOA recommended that KS consider the use of livestock or other compatible agricultural uses for vegetation control.

165. Livestock is generally not an allowed use under the C&C Land Use Ordinance within the zoning districts effective within the KS Property.

#### FLORA AND FAUNA

166. The Commission previously determined that the development of the Waiawa Ridge Project would have no adverse effect on any endemic Hawaiian animal or ecosystem within the KS Property.

167. The development of the solar farm is not anticipated to generate any significant hazards to fauna. The PV modules are similar to those used on rooftops.

168. The development of the solar farm is far less intensive than the previously proposed Waiawa Ridge Project.



## ARCHAEOLOGICAL AND HISTORICAL RESOURCES

169. An archaeological reconnaissance and inventory survey of a 3,600-acre area, which included the KS Property, was approved by the State Historic Preservation Division (“SHPD”) on July 7, 1992.

170. In April 2014, the SHPD determined that an archaeological inventory survey (“AIS”) should be conducted within the entire KS Property.

171. In 2014, TCP Hawai`i, LLC, completed the fieldwork for an AIS of the entire KS Property, as well as the two existing access roads into the KS Property and two linear transects representing utility tie-ins for the proposed solar farm.

172. TCP Hawai`i, LLC, submitted an AIS of the entire KS Property, as well as the two existing access roads into the KS Property and two linear transects representing utility tie-ins for the proposed solar farm (the “2014 AIS”) to the SHPD in September 2014.

173. The entire KS Property had been completely altered by plantation-era activities and construction. There was evidence of extensive bulldozing and road construction in all three gulches, and evidence that some of the gulches were used as reservoirs.

174. The gulches have all been modified and cleaned up. No Hawaiian sites, no Hawaiian skeletal remains, no heiau, no habitation sites, and no agricultural sites were found in the gulches.

175. The 2014 AIS documents three historic properties, all plantation-era sites dating from the early to middle 20th century, consisting of 55 component features: (a) SIHP # 50-80-09-2270, a network of roads and railroad rights-of-way consisting of 28 features; (b) SIHP # 50-80-09-2273, an irrigation system consisting of 25 features; and (c) SIHP # 50-80-09-2271, the remains of workers' camps consisting of two features.

176. TCP Hawai'i, LLC, located SIHP # 50-80-09-2270, which is a series of roads, many of which appear on maps from the 1920s, 1930s, and 1940s. The military used some of the roads during World War II. They are essentially dirt roads.

177. SIHP # 50-80-09-2271 consists of two features. Feature 1 is the structural remains of a pineapple cannery. Feature 2 is camp debris, which TCP Hawai'i, LLC, evaluated as not a significant historic property.

178. TCP Hawai'i, LLC, located SIHP # 50-80-09-2273. It is part of the plantation irrigation infrastructure (a system of ditches, siphons, and water retention features).

179. No petroglyph sites were found within the KS Property.

180. TCP Hawai`i, LLC, recommends an effect determination of “effect, with proposed mitigation commitments” for the solar farm areas. No further archaeological or historic preservation work is needed at any of the sites or their component features within the solar farm areas (SIHP #s 50-80-09-2270, 50-80-09-2271 and 50-80-09-2273).

181. TCP Hawai`i, LLC, recommended that no formal effect determination or proposed mitigation be made on the remaining portions of the KS Property until those portions of the KS Property are proposed for development.

182. SHPD approval of the TCP Hawai`i, LLC, AIS is pending, and TCP Hawai`i, LLC's, conclusions will have to be approved by the SHPD.

183. Petitioner will revise and resubmit the AIS to the SHPD if the SHPD requests revisions to the pending AIS. Petitioner will comply with any mitigation measures in the approved AIS or protection plan required by the AIS.

#### CULTURAL RESOURCES

184. A Cultural Impact Assessment (“CIA”) for 3,600 acres of land, which included the KS Property, was prepared by Cultural Surveys Hawai`i, Inc., in 2003 in anticipation of the Waiawa Ridge Project.

185. A Cultural Resources Preservation Plan (“CRPP”) was prepared in 2005 by Aki Sinoto Consulting. The sites identified for preservation are not within the KS Property.

186. The preparers of the CIA reached out to over 66 people to gather information. People contacted included people that were associated with the plantation, people that grew up specifically in Waiawa, and also included consultation with the Wahiawā Hawaiian Civic Club.

187. The SHPD approved the CRPP in 2007.

188. In 2010, KS initiated an ethno-historical study for KS’ lands within the region of `Ewa. That study included Waiawa and the lands owned by KS in Kalawao and the Waiau ahupua`a.

189. There were no traditional or customary practices that occurred within the KS Property.

190. No cultural practices or cultural resources have been identified within the KS Property.

191. No active traditional and customary practices have been documented within the KS Property. Therefore, development of the solar farm will not have any adverse effect upon Native Hawaiian traditional and customary rights.



192. The KS Property was part of the large ahupua`a that was awarded to Victoria Kamamalu, and then passed to Ruth K. Ke`eliokalani, and then to Princess Pauahi, and then to Bishop Estate. No families have claimed prior ownership of the KS Property.

#### GROUNDWATER AND SURFACE WATER RESOURCES

193. The Waiawa Shaft entrance is situated adjacent to the KS Property, along the western wall of Waiawa Stream.

194. The Waiawa Shaft is the primary source of drinking water for military and civilian users in the Pearl Harbor area.

195. The ZOC is the area that contributes or replenishes groundwater within the Waiawa Shaft.

196. In 1990, the State of Hawai`i Department of Health ("DOH") prepared a study titled "Report to the Office of State Planning by the Department of Health Safe Drinking Water Branch on the Delineation of the Hydrologic Zone of Contribution for the U.S. Navy Waiawa Shaft" (Revised Dec. 1990) ("ZOC Study"). The ZOC Study was undertaken to identify the ZOC of the Waiawa Shaft. The Navy concurred with the methodology of the ZOC Study and the location of the Zone of Contribution.

197. Portions of the ZOC are located within the eastern portion of the KS Property. The area proposed for Phase 2 is largely within the ZOC.

198. The solar panels will need to be cleaned once or twice a year (depending upon rainfall) with water that it will truck onto the KS Property. No cleansers or other additives will be added to the water or used to clean the panels.

199. SunEdison plans to use grasses as a vegetated groundcover. Typically, SunEdison uses a U. S. Environmental Protection Agency-certified herbicide to help control the growth of the vegetation.

200. Within Phase 2, if pursued, SunEdison plans to use handheld devices to control vegetation, and to not use any weed mowers that have a lubricant. If any solar farm activities take place within the ZOC, the vegetated groundcover will be maintained through mechanical means by utilizing zero-turn mowers and weed trimmers.

201. The development of the Phase 1 and Phase 2 solar farms should have minimal or no impact on groundwater.

202. The solar farm is a compatible land use within the ZOC.

## RECREATIONAL AND SCENIC RESOURCES

203. The solar farm, as an almost entirely passive use of land, will not generate or increase the demand on existing recreational facilities or resources; no residences will be installed within the solar project.

204. The solar farm will not prevent any existing recreational uses of the KS Property. There is no current recreational use of the KS Property. There are no hiking or hunting areas that require public access across the KS Property.

205. The only feasible means of accessing nearby State Land Use Conservation District lands is via the Waiawa Correctional Facility.

206. The solar farm is not expected to adversely impact scenic resources or view corridors. Existing views from the surrounding communities will remain intact. Views from Pacific Palisades, Ka Uka Boulevard, the Waipi`o Sports Park, and Waipi`o Uka Street will experience minimal change due to the development of Phase 1 or Phase 2 of the solar farm.

207. As part of the CUP Minor process, SunEdison will be required to submit a landscape plan to the DPP. However, even without project-specific landscaping, because the areas proposed for the solar farm are naturally buffered from view, minimal impacts on views are expected. To the extent required by the DPP under the CUP Minor process, a vegetation buffer will be created.

208. Based on the findings of the preliminary solar glare hazard analysis for the solar farm, the solar farm will not result in glare to aircraft landing or departing from the Honolulu International Airport.

209. If glint or glare from the solar farm PV array creates a hazardous condition for pilots, the facility operator must be prepared to immediately mitigate the hazard upon notification from the DOT, Airports Division, or the Federal Aviation Administration ("FAA").

210. SunEdison represented that it would comply with the conditions requested by the DOT with respect to glare and glint.

## ENVIRONMENTAL QUALITY

### NOISE

211. The solar farm is a relatively passive operation. The racking systems are fixed and do not have any moving parts. The electrical equipment does not include any mechanical or motorized equipment that will generate noise.

212. Operation and maintenance of the solar farm could generate minimal vehicular noise.

213. During site preparation and construction of the solar farm, noise will be generated. All construction noise must be in compliance with HAR chapter 11-46 (regulations for community noise control).



214. Due to the remote location of the KS Property and the distance of the proposed solar farm areas from existing communities, it is anticipated that if there are any noise impacts, those impacts will be minimal.

215. If noise from construction activities exceeds permissible sound levels, Petitioner will obtain a Community Noise Permit from the DOH in accordance with HAR chapter 11-46 Community Noise Control.

#### AIR QUALITY

216. There are no direct air emissions from the operations of a solar farm.

217. During construction of the solar farm, there will be short-term impacts to air quality due to the emission of fugitive dust and an increase in exhaust emissions from construction vehicles.

218. Petitioner will minimize air quality impacts through fugitive dust measures required under HAR section 11-60.1-33 and institute temporary Best Management Practices (“BMPs”) to mitigate impacts, such as watering, dust fences, windbreaks, and other soil management measures.

ADEQUACY OF PUBLIC SERVICES AND FACILITIES

HIGHWAY AND ROADWAY FACILITIES

219. The DOT requested that KS prepare a traffic assessment for the solar farm project for DOT review and approval.

220. Based on the information provided in the Motion to Amend, the proposed solar farm development will not adversely impact State highway facilities.

221. The DOT recommended that the access road that connects to the Mililani Cemetery Road be located far enough away from the connection to Ka Uka Boulevard to avoid queuing onto the Boulevard. Petitioner agreed to comply with this recommendation.

222. SunEdison had Fehr & Peers prepare a Traffic Assessment for the construction phase of Phase 1 of the solar project.

223. The Traffic Assessment focused on the construction period only, as once Phase 1 is in operation, no more than five employees are expected to be onsite at any given time.

224. The two potential access points to the KS Property are from: (1) a driveway located on Waiawa Prison Road, which is along the northern edge of the KS Property, with regional connections to the H-2 Freeway via Ka Uka Boulevard and

Mililani Cemetery Road; and (2) a driveway located on Waihona Street, mauka of Kamehameha Highway, located at the southern portion of the KS Property.

225. Both points of access are sufficient as-is for the anticipated construction traffic required to develop the solar farm project.

226. Fehr & Peers developed two project trip generation estimates for the construction of Phase 1 of the solar project and compared those estimates to the 2016 baseline.

227. The most conservative, highest trip generation estimates assume that each of the 150 construction workers will drive individual vehicles to the KS Property, and that the majority of trips will occur during the AM and PM peak hours. The second trip estimate assumed that 95 percent of the construction employees will drive to an off-site parking area, and be shuttled from there to the KS Property via a shuttle bus arranged by the contractor, and that the majority of the trips will not occur during the AM and PM peak hours.

228. The conservative analysis results in 342 trips a day (168 AM peak trips and 168 PM peak trips). The employee shuttle analysis results in 66 trips a day (19 AM peak trips and 18 PM peak trips).

229. The 2016 baseline level of service is better than the acceptable level of service (“LOS”) D at all but the Waihona Street PM peak, where the 2016 baseline LOS is F during the PM peak and LOS D during the AM peak hour.

230. Under the conservative analysis, the projected level of service will be at the acceptable LOS of D or better at all but two intersections. The Waihona Street intersection will remain at LOS F during the PM peak, and the Ka Uka Boulevard/H-2 northbound off-ramp will be LOS D during the PM peak.

231. Under the employee shuttle analysis, the projected LOS will be at the acceptable LOS D or better at all intersections except for the Waihona Street intersection, which will remain at LOS F during the PM peak.

232. Petitioner will cause SunEdison through its contractor to adopt and comply with the traffic mitigation plan recommended in the Traffic Assessment, and to meet the LOS of the second trip estimate through adjusted work hours of the construction workers or other mitigations and, if necessary, a shuttle service.

233. With respect to Phase 2, Petitioner agreed to have a traffic assessment completed and accepted by the DOT prior to construction of Phase 2.

234. The solar farm will have minimal impact on the operations of the nearby Waiawa Correctional Facility but has the potential to impede access to Ka Uka Boulevard during the construction period.



235. The Department of Public Safety (“DPS”) expressed concerns whether using Mililani Cemetery Road for construction traffic could impede access to the Waiawa Correctional Facility, and therefore requested that the developer keep the Correctional Facility informed of planned activity that could impact access to the Correctional Facility.

236. Construction activities related to reservoir decommissioning on the KS Property recently took place, which generated traffic along Waiawa Prison Road and Mililani Cemetery Road. No significant operational or safety issues were identified as a result of the construction activities.

237. KS and SunEdison represented that management at the Waiawa Correctional Facility will be kept informed of any activity expected to result in a significant imposition to access along Mililani Cemetery Road.

238. KS will implement the following construction management measures recommended by Fehr & Peers: (a) signage between Ka Uka Boulevard interchange and the access driveway into the KS Property on Waiawa Prison Road; (b) adequate sight distance for drivers along Waiawa Prison Road approaching the access to the KS Property; (c) vegetation management along the Mililani Cemetery Road and Waiawa Prison Road, if needed; and (d) manual traffic control along Waiawa Prison Road to manage construction and prison traffic.

239. SunEdison will have its contractors put work scheduling and, if necessary, the employee shuttle measures in place.

240. Should Phase 2 go forward, a traffic assessment will be prepared for the DOT's review and acceptance prior to the construction of Phase 2. The mitigation measures recommended in the accepted traffic assessment will be implemented by SunEdison in any construction traffic management plan that is prepared for Phase 2.

#### DRAINAGE AND STORMWATER

241. Group 70 International, Inc., prepared a preliminary civil engineering assessment for the solar farm.

242. Clearing, grubbing, and grading will be needed for placement of the solar panels, equipment, facilities, access driveways, fence, and vegetated buffer. In general, the PV racks will be concentrated in areas of more gradual slopes.

243. It is anticipated that the earthwork volumes and related construction costs will be minimized by optimal placement of the PV racks by following the existing grades and elevations. Where possible, the existing agricultural roads will continue to be utilized for access.

244. Prior to grading and grubbing of the KS Property, permits and approvals will be required from the State of Hawai'i and the C&C to allow grading and

grubbing of the site, including a DOH - NPDES General Permit for Construction Activities, Notice of Intent, and a C&C Grading, Grubbing, and Stockpiling Permit.

245. Issuance of these permits requires agency review of grading and erosion control construction plans, stormwater pollution prevention plans, erosion control calculations, and drainage reports.

246. Existing runoff at the KS Property discharges through sheet flow or shallow concentrated flow into swales onto adjacent downstream areas. The existing drainage patterns will not be altered in the development of the solar farm.

247. The solar farm will create minimal additional impervious area (from concrete equipment pads, equipment buildings, and micropile/pier foundations), and that impervious areas will be evenly distributed throughout the solar farm easement areas. As a result, there will not be a significant pre-development to post-development increase in stormwater flows from the construction of the solar farm.

248. Both temporary and permanent BMPs will be required through the grading and erosion control regulations and permits required by the State and the C&C. To the extent required, temporary BMPs will be implemented during construction activities and will remain in place until Permanent BMPs can be established.

249. It is anticipated that the erosion control BMPs to be used onsite will include: preservation of natural vegetation, minimization of areas of clearing and

grubbing, vegetated buffers, temporary soil stabilization with grass and/or mulch, silt fences/fiber filtration tubes, gravel bag berms/check dams, stabilized construction entrances, sediment traps and basins, temporary diversion swales and ditches, and water application and/or dust screens for dust control.

250. The permanent BMPs anticipated to be used within the solar farm area include: permanent soil stabilization with landscaping, pavement, or gravel, infiltration trenches, dry wells and sumps, grass swales and ditches, filter strips, and sediment traps and basins.

#### SOLID WASTE

251. Upon decommissioning, SunEdison will seek to recycle the metal components utilized in the solar farm. SunEdison will not dispose of any solar farm components in a Hawai'i landfill.

#### POLICE AND FIRE PROTECTION

252. There will be a security fence around the solar farm area, and a second fence around the substation is likely.

253. The solar farm will not make use of Extreme Power Batteries, such as used in other projects.

254. The C&C Board of Water Supply does not have any lines delivering drinking water to the KS Property. KS has worked with the Honolulu Fire Department



to give the Department access to the KS Property, and there is an agreed upon plan for addressing fires.

255. Development of the solar farm should reduce the chances of wildfires because the project includes security, which should reduce arson, and will also control the natural vegetation, which is a fuel source for wildfires.

256. The substation will have fire protection controls that will shut the facility down in the event of fire.

257. Water does not work to put out fires at battery storage or substation areas. Those improvements are designed with controls that shut down the components if there is a fire and prevent the heat from moving to other components of the storage area.

#### ENERGY/ELECTRICAL SERVICES

258. Imported oil currently supplies nearly all of Hawai`i's energy, making it the most dependent state in the United States. Hawai`i imports approximately 90 percent of the oil needed. The high cost of electricity exports a lot of money from the Hawai`i economy.

259. The State of Hawai`i has adopted a goal of using clean energy to meet 70 percent of Hawai`i's energy demand, with 40 percent of that clean energy to

come from locally-generated renewable sources, and 30 percent to come from efficiency measures.

260. The State is fully supportive of the Hawai'i Clean Energy Initiative to reduce Hawai'i's reliance on fossil fuels and promote energy independence.

Development of the solar farm is consistent with the State's goals.

261. The average cost for residential electricity in Hawai'i is approximately 37 cents per kilowatt hour, and HECO's current avoided cost of power from primary fossil fuel baseload generation is approximately 22 cents per kilowatt hour. That price is more than triple the national average of 12 cents per kilowatt hour.

262. HECO issued two rounds of requests for proposals for Low-Cost Waiver projects on O'ahu. The PUC approved waivers from competitive bidding for both rounds of waiver projects.

263. Initially, HECO sought projects that could provide power under at a price of 17 cents per kilowatt hour. In the second round, HECO set a new threshold price of 16.25 cents per kilowatt hour. The average price of the second round waiver projects was approximately 15.9 cents per kilowatt hour.

264. Through a confidential process, HECO selected nine projects consisting of 240 MW. All of the power purchase agreements between HECO and the selected renewable energy projects must be approved by the PUC.

265. Some of the renewable energy projects dropped out of the HECO Low-Cost Waiver project.

266. SunEdison represented that the solar farm should not inhibit or restrict HECO's ability to accept PV power from individual homes and businesses that also wish to use solar energy because the solar farm will connect to the grid at the 46kV level.

267. Residential and commercial PV systems connect to the HECO grid at a distribution level of 12kV. Utility scale solar power, such as proposed by SunEdison, connects to the grid at a sub-transmission level at 46kV. Therefore, SunEdison's connection will not directly compete with residential and commercial PV systems' connections.

268. There is an upper limit to the total amount of intermittent renewable energy which can connect to the HECO grid. The HECO grid as a whole could add an additional 300 MW of solar power and an additional 100 MW of wind power with limited updates to their current operations As explored in the recent Power Supply Improvement plan commissioned by HECO and filed with the PUC for their review and approval, this upper limit may be further increased if HECO proceeds with battery storage projects which would ameliorate some of the issues created by intermittent energy resources.

269. Unlike residential rooftop solar panels, a solar farm of the size planned for the KS Property must follow very specific protocols to ensure that there are not reliability concerns.

COMMITMENT OF STATE FUNDS AND RESOURCES

270. The solar farm project is expecting to access state tax credits and federal investment tax credits. Federal investment tax credits comprise 30 percent of the total value of Phase 1.

271. All solar farm infrastructure will be developed and financed by SunEdison.

CONFORMANCE WITH THE GOALS, OBJECTIVES, AND POLICIES OF THE HAWAI'I STATE PLAN

272. The interim use of portions of the KS Property as a solar farm is consistent with applicable goals, objectives, and policies of the Hawai'i State Plan, HRS chapter 226.

273. The solar farm is consistent with the following objectives and policies of the Hawai'i State Plan:

HRS § 226-18: Objectives and Policies for Facility Systems - Energy

(a) Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:



(a)(1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;

(a)(2) Increased energy self-sufficiency where the ratio of indigenous to imported energy use is increased;

(a)(3) Greater energy security and diversification in the face of threats to Hawai'i's energy supplies and systems; and

(a)(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use.

(b) To achieve the energy objectives, it shall be the policy of this State to ensure the short- and long-term provision of adequate, reasonably priced, and dependable energy services to accommodate demand.

(c) To further achieve the energy objectives, it shall be the policy of this State to:

(c)(1) Support research and development as well as promote the use of renewable energy sources;

(c)(2) Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth;

(c)(3) Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public

health costs and benefits;

(c)(4) Promote all cost-effective conservation of power and fuel supplies through measures, including:

(A) Development of cost-effective demand- side management programs;

(B) Education; and

(C) Adoption of energy-efficient practices and technologies;

(c)(5) Ensure, to the extent that new supply-side resources are needed, that the development or expansion of energy systems uses the least-cost energy supply option and maximizes efficient technologies;

(c)(8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications;

(c)(10) Provide priority handling and processing for all state and county permits required for renewable energy projects.

274. The solar farm is consistent with the following State priority guidelines under HRS section 226-103 with respect to encouraging the development of clean industries.

Hawai'i State Plan Priority Guidelines; HRS § 226-103 - Economic Priority Guidelines

HRS §226-103(a)(8). Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics:

(A) An industry that can take advantage of Hawai`i's unique location and available physical and human resources.

(B) A clean industry that would have minimal adverse effects on Hawai`i's environment.

275. The solar farm is consistent with the following State priority guidelines under HRS section 226-103 with respect to energy use and development:

HRS §226-103(f). Priority guidelines for energy use and development:

- (1) Encourage the development, demonstration, and commercialization of renewable energy sources.
- (2) Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.
- (3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.
- (4) Encourage the development and use of energy conserving and cost-efficient transportation systems.

CONFORMANCE WITH THE COASTAL ZONE MANAGEMENT PROGRAM

276. The interim use of portions of the KS Property as a solar farm conforms with the objectives and policies of the Coastal Zone Management program under HRS chapter 205A.

## RULINGS ON PROPOSED FINDINGS OF FACT

Any of the findings of fact submitted by Petitioner or other parties not already ruled upon by the Commission by adoption herein, or rejected by clearly contrary findings of fact herein, are hereby denied and rejected.

Any conclusion of law herein improperly designated as a finding of fact should be deemed or construed as a conclusion of law; any finding of fact herein improperly designated as a conclusion of law should be deemed or construed as a finding of fact.

## CONCLUSIONS OF LAW

1. Pursuant to HRS chapter 205 and the Commission Rules under HAR chapter 15-15, and upon consideration of the Commission decision-making criteria under HRS section 205-17, the Commission finds upon the clear preponderance of the evidence that the use of the identified portions of the KS Property, consisting of approximately 655 acres of land situated at Waiawa and Waipi`o, `Ewa, O`ahu, Hawai`i, identified as TMKs: 9-4-06: 34 (por.), 35 (por.), 36, and 37 (por.) and 9-6-04: 24 (por.), 25, and 26, as a solar farm to include all related utility and other infrastructure for a period not to exceed 35 years from the date of this Order, and subject to the conditions imposed herein, is reasonable, not violative of HRS section 205-2 and part III of HRS chapter 205, and is consistent with the policies and criteria established pursuant to HRS sections 205-16, 205-17, and 205A-2.



2. Pursuant to HRS chapter 205 and the Commission Rules under HAR chapter 15-15, and upon consideration of the Commission decision-making criteria under HRS section 205-17, the Commission finds upon the clear preponderance of the evidence that the development and operation of the solar farm is consistent with the prior conditions of approval imposed under the Waiawa Order.

3. Article XII, section 7, of the Hawai`i State Constitution requires the Commission to protect Native Hawaiian traditional and customary rights. The State of Hawai`i reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of Native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights. The State and its agencies are obligated to protect the reasonable exercise of customarily and traditionally exercised Native Hawaiian rights to the extent feasible. *Public Access Shoreline Hawai`i v. Hawai`i County Planning Commission*, 79 Haw. 425, 450, n. 43, *certiorari denied*, 517 U.S. 1163 (1996).

4. The Commission is empowered to preserve and protect customary and traditional rights of Native Hawaiians. *Ka Pa`akai O Ka `Aina v. Land Use Commission*, 94 Hawai`i 31, 7 P.3d 1068 (2000).

5. Article XI, section 1, of the Hawai'i State Constitution requires the State to conserve and protect Hawai'i's natural beauty and all natural resources, including land, water, air minerals, and energy sources, and to promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State.

6. Article XI, section 1, of the Hawai'i State Constitution further states that all public natural resources are held in trust by the State for the public benefit. Government bodies are precluded from authorizing a proposed use that will impact the public trust in the absence of an affirmative showing that the use does not conflict with public trust principles and purposes." *Kaua'i Springs v. Planning Comm'n of the Cnty. of Kaua'i*, 2014 WL 812683 (Haw. Feb. 28, 2014).

7. Article XI, section 3, of the Hawai'i State Constitution requires the State to conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency, and assure the availability of agriculturally suitable lands.

8. The Petition Area is not classified as Important Agricultural Land under Part III of HRS chapter 205.

9. Article XI, section 7, of the Hawai`i State Constitution states that the State has an obligation to protect, control, and regulate the use of Hawai`i's water resources for the benefit of its people.

10. The Commission concludes that it has observed and complied with its duties arising under Article XI, section 1; Article XI, section 3; Article XI, section 7; and Article XII, section 7, of the Hawai`i State Constitution.

#### DECISION AND ORDER

IT IS HEREBY ORDERED that the identified areas within the KS Property, consisting of approximately 655 acres of land situated at Waiawa and Waipi`o, `Ewa, O`ahu, Hawai`i, identified as TMKs: 9-4-06: 34 (por.), 35 (por.), 36, and 37 (por.) and 9-6-04: 24 (por.), 25, and 26, and shown approximately on Exhibit "A," attached hereto and incorporated by reference herein, may be used as a solar farm to include all related utility and other infrastructure for a period not to exceed 35 years from the date of this Order.

Based upon the findings of fact and conclusions of law stated herein, it is hereby determined that the use of the identified areas within the KS Property for a solar farm will not significantly affect or impair the preservation or maintenance of natural systems and habitats or the valued cultural, historical, agricultural, and natural resources of the area.

IT IS FURTHER ORDERED that the use of the identified areas within the KS Property for a solar farm shall be subject to the following conditions:

1. Revised Master Plan. Petitioner shall submit to the Commission a revised master plan and schedule for development for the approximately 1,395-acre KS Property within five (5) years from the date of the Commission's issuance of an order approving the Motion to Amend.

2. Access to the Waiawa Correctional Facility. Petitioner shall cause the solar farm operator to ensure that the construction and installation of the solar farm within the KS Property shall not prevent roadway access to the Waiawa Correctional Facility.

3. Previously Unidentified Burials and Archaeological/Historic Sites. A supplemental AIS for the entire 1,395-acre Petition Area shall be prepared by a qualified archaeologist to determine potential impacts and to ensure that appropriate mitigation is implemented as needed. The supplemental AIS shall be submitted to the SHPD and accepted prior to the start of construction.

In the event that historic resources, including human skeletal remains, are identified during construction activities, all work shall cease in the immediate vicinity of the find, the find shall be protected from additional disturbance, and the SHPD, O'ahu Island Section, shall be contacted immediately. Without any limitation to any



other condition found herein, if any burials or archaeological or historic sites, such as artifacts, marine shell concentrations, charcoal deposits, stone platforms, paving, and walls not previously identified in studies referred to herein, are discovered during the course of construction of the solar farm project, all construction activity in the vicinity of the discovery shall stop until the issuance of an archaeological clearance from the SHPD that mitigative measures have been implemented to its satisfaction.

4. Aircraft Hazard. If glint or glare from the photovoltaic array creates a hazardous condition for pilots, Petitioner shall cause the solar farm facility operator to be prepared to immediately mitigate the hazard upon notification by the DOT, Airports Division, or the FAA.

5. Traffic Impacts.

a. Phase 1. Prior to the start of construction of Phase 1 of the solar project, Petitioner shall cause the solar farm operator to address any comments that may be made by the DOT regarding the August 1, 2014, "Construction Traffic Assessment for the Proposed Waiawa Solar Farm" that was prepared for the solar farm project, and to implement the mitigations recommended in the Fehr & Peers Traffic Assessment.

b. Phase 2. Petitioner shall cause the solar farm operator to prepare and submit to the DOT for review and to obtain acceptance of a Traffic Assessment for Phase 2 of the solar project prior to the start of construction of Phase 2.

6. Development Schedule. Phase 1 of the solar farm shall be substantially completed within five (5) years from the date of the Commission's issuance of an order approving the Motion to Amend. Phase 2 of the solar farm shall be substantially completed within ten (10) years from the date of the Commission's issuance of an order approving the Motion to Amend.

7. Interim Use of the Petition Area. The interim use of the Petition Area shall be limited to a utility-scale solar energy development, or solar farm. No other use shall be permitted without the prior written approval of the Commission.

8. Timeframe of Interim Use. The interim use of the Petition Area for the proposed solar farm, including any and all permitting, construction, operation, and decommissioning activities associated with the solar farm, shall not exceed a period of 35 years from the date of this Decision and Order without the prior written approval of the Commission.

9. Metes and Bounds Map and Description. The proposed solar farm shall be limited to the acreage and boundaries identified in Petitioner's Phasing Plan shown in Petitioner's Exhibit 8 Errata (filed 6/20/14). Petitioner shall provide a metes

and bounds map and description of both phases to the Commission within one year from the date of this Decision and Order.

10. Decommissioning of the Solar Farm. The solar farm shall be decommissioned following its operational timeframe. The decommissioning activities shall include, but not be limited to, the complete removal of the foundational piers and modules and all associated components. All metal components shall be recycled to the extent possible and no solar farm components shall be disposed of in any landfill in the State of Hawai'i. Any future use of the Petition Area following the decommissioning of the solar farm shall be subject to the environmental review process promulgated under HRS chapter 343, as applicable, and shall require the filing of a motion to amend the Decision and Order with the Commission. Such motion to amend shall include a revised master development plan of the proposed use and shall further include, but not be limited to, a revised Traffic Impact Analysis Report, Engineering Report, Socio-Economic Analysis Report, Environmental Report, and AIS.

11. Compliance with Representations. Petitioner shall cause the solar farm operator to develop and operate Phase 1 and Phase 2 of the solar farm, including the implementation of measures to mitigate potential impacts of the development, in substantial compliance with the representations made to the Commission as reflected in this Decision and Order. Such mitigation measures include, but are not limited to, the

use of temporary and permanent BMPs to ensure that the development and operation of the solar farm do not result in an increase in stormwater runoff that adversely impacts downstream properties. Failure to do so may result in reversion of the Petition Area to its former classification, or change to a more appropriate classification.

12. Notice of Change of Ownership. Petitioner shall give notice to the Commission of any intent to sell, lease, assign, place in trust, or otherwise voluntarily alter the ownership interests in the Petition Area, prior to development of the Petition Area.

13. Annual Reports. Petitioner shall timely provide without any prior notice, annual reports to the Commission, OP, and the DPP in connection with the status of the subject project and Petitioner's progress in complying with the conditions imposed herein. The annual report shall be submitted in a form prescribed by the Executive Officer of the Commission.

14. Release of Conditions. The Commission may fully or partially release the conditions provided herein as to all or any portion of the Petition Area upon timely motion and upon the provision of adequate assurance of satisfaction of these conditions by Petitioner.

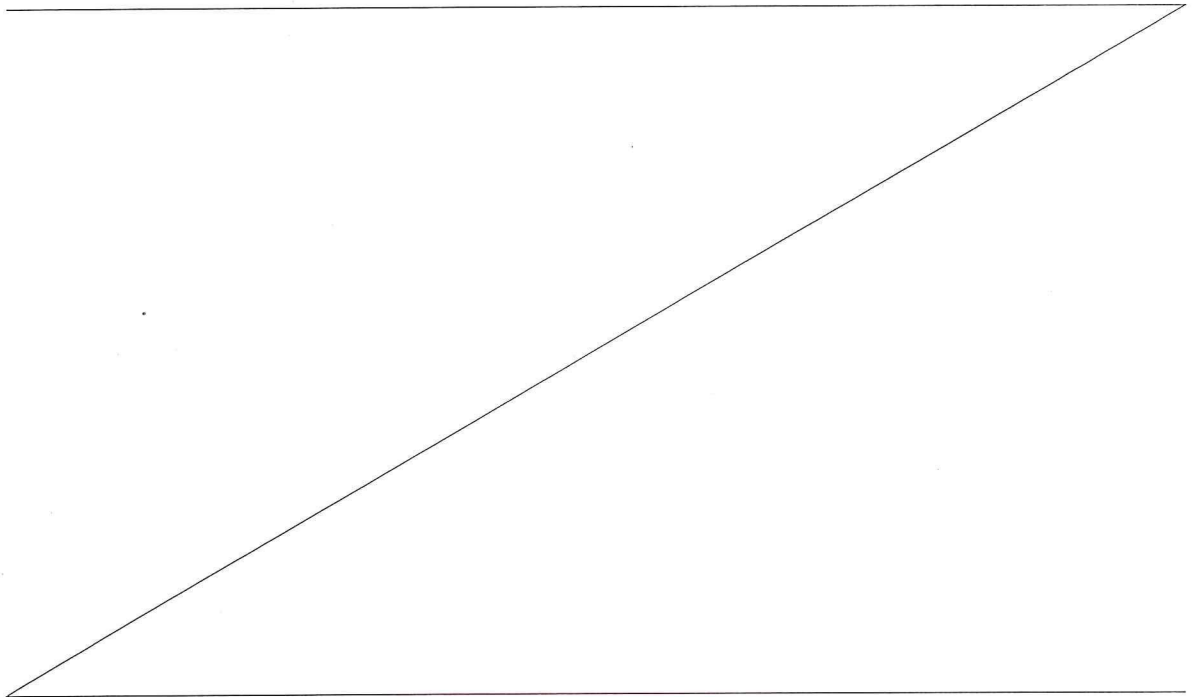
15. Notice of Imposition of Conditions. Within seven (7) days of the issuance of the Commission's Decision and Order granting the Motion to Amend,

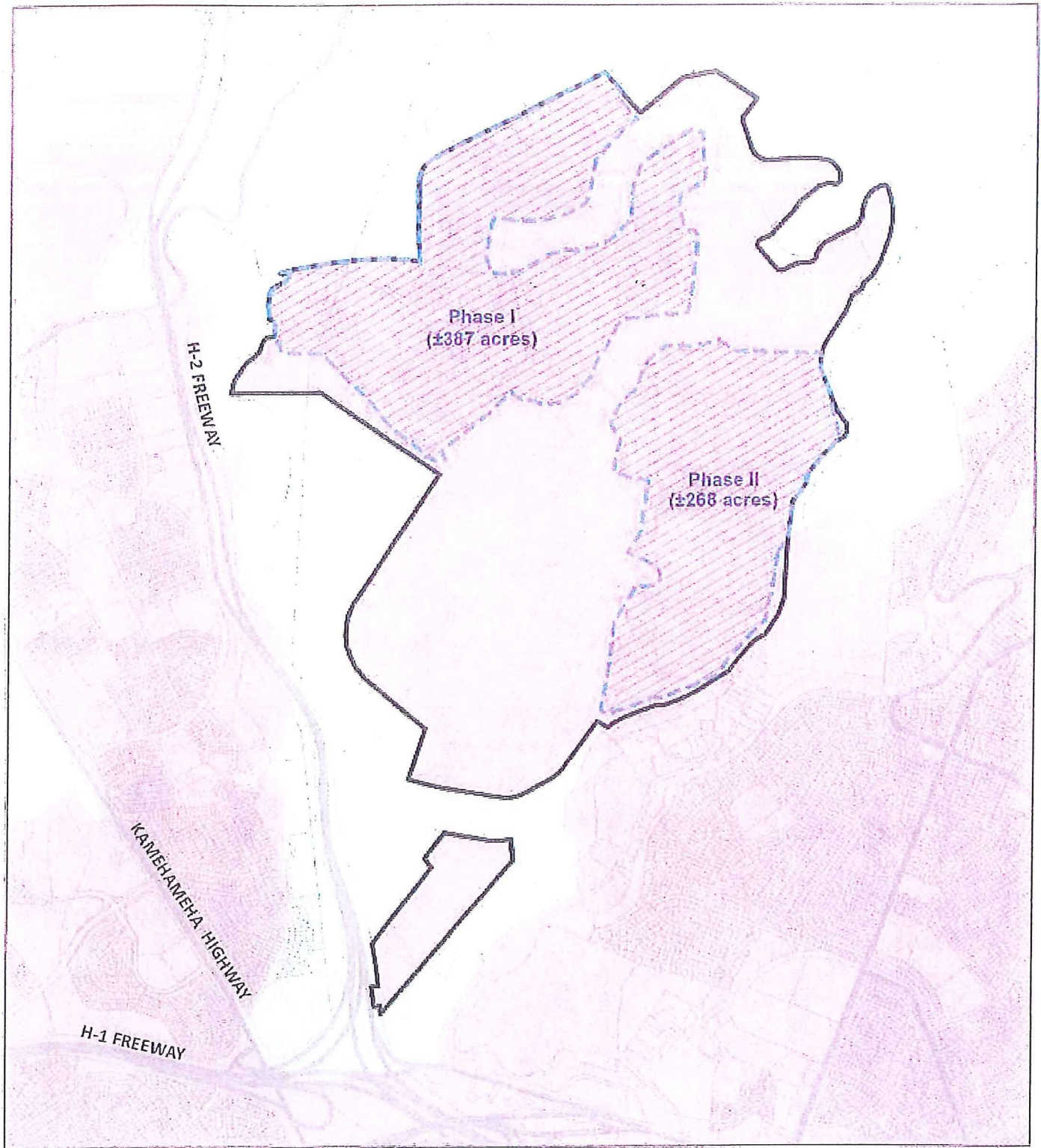


Petitioner shall: (a) record with the Bureau of Conveyances a statement that the Petition Area is subject to conditions imposed herein by the Commission in the granting of the Motion to Amend; and (b) shall file a copy of such recorded statement with the Commission.


16. Recordation of Conditions. Petitioner shall record the conditions imposed herein by the Commission with the Bureau of Conveyances pursuant to HAR section 15-15-92.

IT IS FURTHER ORDERED that the above conditions shall be in addition to the conditions imposed under the Waiawa Order, which are hereby reaffirmed and shall continue in full force and effect.







**LEGEND**


 KS Waiawa Property (SLU Urban, Docket A87-610)

 Photovoltaic Locations

 Agricultural District

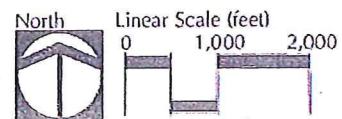
 Rural District

 Conservation District

 Urban District

Source: SunEdison (2014), State Land Use Commission (2014)

Disclaimer: This Graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



Island of O'ahu

Exhibit "A"

ADOPTION OF ORDER

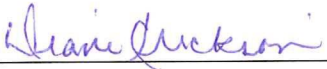
This ORDER shall take effect upon the date this ORDER is certified by this Commission.

Done at Honolulu, Hawai'i, this 26th day of November, 2014, per motion on November 21, 2014.

LAND USE COMMISSION

APPROVED AS TO FORM

STATE OF HAWAI'I

  
Deputy Attorney General

By   
Chad McDonald  
Chairperson and Commissioner

Filed and effective on:

11/26/14

Certified by:

  
DANIEL ORODENKER  
Executive Officer



LAND USE COMMISSION  
STATE OF HAWAII

2014 NOV 26 A 7:15

BEFORE THE LAND USE COMMISSION  
OF THE STATE OF HAWAII

In The Matter Of The Petition Of	)	DOCKET NO. A87-610
	)	
	)	CERTIFICATE OF SERVICE
TOM GENTRY AND GENTRY-PACIFIC,	)	
LTD.	)	
	)	
To Amend The Agricultural Land Use	)	
District Boundary Into The Urban Land	)	
Use District For Approximately 1,395	)	
Acres At Waiawa, `Ewa, O`ahu, State Of	)	
Hawai`i, Tax Map Key Nos.: 9-4-06:	)	
Portion Of 26; 9-6-04: Portion of 1 And	)	
Portion Of 16; And 9-6-05: Portion Of 1,	)	
Portion Of 7 And Portion Of	)	
14	)	

**CERTIFICATE OF SERVICE**

I hereby certify that a copy of the ORDER GRANTING MOTION FOR ORDER AMENDING FINDINGS OF FACT, CONCLUSIONS OF LAW AND DECISION AND ORDER DATED MAY 17, 1988 was served upon the following by either hand delivery or depositing the same in the U. S. Postal Service by regular or certified mail as noted:

	HAND DELIVERED	REGULAR MAIL	CERTIFIED MAIL
LEO ASUNCION, ACTING DIRECTOR Office of Planning 235 S. Beretania Street Rm. 600 Honolulu, Hawai`i 96813	X		



	HAND DELIVERED	REGULAR MAIL	CERTIFIED MAIL
BRYAN YEE, ESQ. Deputy Attorney General Hale Auhau, Third Floor 425 Queen Street Honolulu, Hawai'i 96813		X	
CARLSMITH BALL LLP JENNIFER A. BENCK, ESQ. STEVEN S.C. LIM, ESQ. 1001 Bishop Street, Suite 2200 Honolulu, Hawai'i 96813			X
GEORGE ATTA, DIRECTOR Dept. of Planning & Permitting 650 S. King Street Honolulu, Hawai'i 96813		X	
DONNA Y.L., ESQ. DAWN TAKEUCHI-APUNA, ESQ. Dept. of the Corporation Counsel County of Hawai'i 530 S. King Street, Room 110 Honolulu, Hawai'i 96813		X	

Honolulu, Hawai'i, November 26, 2014




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DANIEL ORODENKER  
Executive Officer