

**BOARD OF ELECTRICIANS AND PLUMBERS**  
Professional and Vocational Licensing Division  
Department of Commerce and Consumer Affairs  
State of Hawaii

MINUTES OF MEETING

Date: Tuesday, February 11, 2014

Time: 10:30 a.m.

Place: King Kalakaua Conference Room  
King Kalakaua Building  
335 Merchant Street, 1st Floor  
Honolulu, HI 96813

Present: Lindsey Kimura, Public Member, Chairperson  
Peter Akamu, Industry Member, Vice Chairperson  
Matt Brady, Industry Member  
Morris Kaneshiro, Industry Member  
Vernon Ta'a, Public Member  
Rodney J. Tam, Deputy Attorney General  
Charlene L.K. Tamanaha, Executive Officer  
Christine Rutkowski, Executive Officer  
Christine Hironaka, Secretary

Excused: Randal Hiraki, Industry Member  
Randall Kaya, Public Member

Guests: Daniel Au – Solar City  
Jim Cahill – Solar City  
Al Itamoto – Electrical Contractors Association of Hawaii (“ECAH”)  
Peter Lee – Hawaii Laborers Employers Cooperation & Education Trust  
 (“LECET”)  
Leslie Cole-Brooks – Hawaii Solar Energy Association (“HSEA”)  
Mark Matsumoto – Laborer’s Local 368  
Joe Saturnia – Island Pacific Energy (“IPE”)  
Gregg Serikaku – Plumbing and Mechanical Contractors Association of  
Hawaii (“PAMCAH”)  
Troy Silva – Hawaii Electricians Market Enhancement Program  
 (“HEMEP”)  
Ryan Takahashi – HEMEP  
Maurice Torigoe – Associated Builders & Contractors (“ABC”)  
Ken Wilson – ABC

Agenda: The agenda for this meeting was filed with the Office of the Lieutenant  
Governor, as required by section 92-7(b), Hawaii Revised Statutes  
 (“HRS”).

Call to Order: There being a quorum present, Chairperson Kimura called the meeting to  
order at 11:37 a.m.

Additions/  
Revisions to  
the Agenda:

It was moved by Vice Chairperson Akamu, seconded by Mr. Kaneshiro and unanimously carried to approve the following additions and deletions to the agenda:

Applications – Addition

- a. ELECTRICIANS
  - 1) Journey Worker Electrician (“EJ”)  
  
FRANCO, Frank  
GOMES, Thomas B.  
PRICE, Morgan
  - 2) Supervising Electrician (“ES”)  
  
NIEDERER, William
- b. PLUMBERS
  - 1) Journey Worker Plumber (“PJ”)  
  
HALAS, Morgan  
PRATT JR., Robert

Approval of  
the Minutes:

The approval of the minutes of the December 17, 2013 Board and Executive Session was deferred to the next meeting.

Executive Officer’s  
Report

- a. Circuit Court Judgments and Final Orders Against Unlicensed Activity (Oct. – Dec. 2013)  
  
The report was distributed to the Board members for informational purposes only as there were judgments and final orders against unlicensed activity for a plumber and electrician.
- b. SB1301 – Email from Glenn Ida, Lobbyist  
  
Mr. Ida’s email to Executive Officer Tamanaha informed the Board that the House Labor Chair will not take any action on this bill unless all parties can come to a consensus.

Examinations:

- a. Examination Results  
  
None.

- Scope:
- a. Hawaii Electricians Market Enhancement Program letter regarding Photovoltaic Installations and Scope of Work for Journey Worker Specialty Electrician. (Deferred from the December 17, 2013 meeting).

Chairperson Kimura asked DAG Tam to discuss the Board's draft interpretation regarding when licensed electricians are required to perform work on solar photovoltaic systems. DAG Tam stated that, as directed by the Board, he tried to draft an interpretation that addressed most of the concerns brought before the Board, and incorporate the Board's comments at its last meeting. Vice Chairperson Akamu stated that the Board has listened to many comments and concerns on this issue. He was concerned that the Board's interpretation could affect other electrical and plumbing work by setting a precedent if they do not require a licensed electrician to physically place or lay a panel on the racking system. He thought there was no difference between that situation and the situation where a licensed electrician is required to place the ballast or light fixture in the hole in the ceiling.

Chairperson Kimura opened the discussion to the public but asked the guests to limit their comments.

Mr. Saturno commented that installing a light fixture is not equivalent to what a PV contractor does. A C-60 or C-13 should do the work. Executive Officer Tamanaha responded that there are other licensees that can place panels on rails.

Mr. Matsumoto from the Laborer's Union asked, "Doesn't this interpretation only concern the PV system installation?" Vice Chairperson Akamu stated that his concern is that the decision will affect other trades.

Mr. Cahill from Solar City opined that he did not think a licensed electrician is required to place panels on rails.

Ms. Cole-Brooks added that the C-60 contractor has extensive training to place panels on the roof and did not think it is the intention of the Board to have licensed electricians taking the panels out of boxes and carrying them onto the roof. Chairperson Kimura asked "Who does the actual placement of panels?" Mr. Saturno responded that the trained employees of the C-60 contractor placed the panels on the racks/rails.

Executive Officer Tamanaha commented that any electrical installation requires some sort of electrical license. A contractor must be in compliance with all other laws.

Mr. Au from Solar City asked "With the technological changes, can laws evolve with technology?" DAG Tam responded that the

Board wants to have consistency in its decision, and is trying to come up with an interpretation that can be applied to different types of technologies and building materials.

DAG Tam asked Mr. Cahill "Where is considered bonding and grounding in your system?" Mr. Cahill responded that he has been using the zap system which is being installed nationwide. There are no rails. Panels are snapped into metal pucks. Vice Chairperson Akamu commented that when you snap the footer and module together it creates a bond to the metal footer. Executive Officer Tamanaha added that placing the panel into the puck is bonding and grounding. Chairperson Kimura also added that task can be done by anyone under the supervision of a licensed electrician. DAG Tam said that the discussions seem to indicate that the bonding and grounding depends on the material and composition of the material.

Mr. Cahill asked if the Deputy Attorney General's draft interpretation for the Board will be circulated for comment or let the 2009 decision stand. Mr. Kaneshiro added that the City and County inspectors are also asking for clarification that a licensed electrician should be doing grounding and bonding work. Vice Chairperson Akamu also stated that the Board intends to clarify the definition so everyone understands grounding and bonding. This will assure the public that they do not have a substandard system.

Mr. Ta'a stated that he is a public member trying to determine at what point is the panel system a danger to the public. The Board is trying to ensure that danger or harm does not exist. He did not believe that a licensed electrician is required to place the panels on the racks. Executive Officer Tamanaha added that there is no consensus on whether a licensed electrician is required to physically place panels on the racks.

Mr. Takahashi stated that placing of the panel does not agree with exclusion of electrical wiring. The NEC has a separate section for PV.

Executive Officer Tamanaha asked if the Board wanted comments to the language in the draft interpretation submitted by DAG Tam. Ms. Cole-Brooks asked if the draft statement could be posted on the Board's website.

It was moved by Mr. Kaneshiro, seconded by Mr. Brady, and unanimously carried to post the Board's draft Solar Photovoltaic Systems informal interpretation on the Board's website for public comment as follows:

**BOARD OF ELECTRICIANS AND PLUMBERS**

February 13, 2014

**SOLAR PHOTOVOLTAIC SYSTEMS**

This general interpretation would apply to all types of solar PV systems:

- “(a) For solar photovoltaic systems, a licensed journey worker electrician or supervising electrician shall be required to:
- (1) Perform all bonding and grounding work on such systems (including but not limited to WEEBs or “Washer, Electrical Equipment Bonding”);
  - (2) Perform all electrical wiring on such systems that generates, transmits, transforms, or utilizes electrical energy within the scope and purpose of the National Electrical Code, as adopted by each county; and
  - (3) Make the electrical connection from the system to the electrical meter.
- (b) Notwithstanding the provisions in subsection (a), a licensed electrician shall not be required to:
- (1) Deliver and transport the panels or other photovoltaic materials onto the roof or other surfaces or facades;
  - (2) Install the footers or base (e.g., racks) that supports any rail mounting system on the roof or other surfaces or facades, unless the footers or base are part of the bonding or grounding mechanism for the solar photovoltaic system;
  - (3) Physically pierce, waterproof, or reinforce the roof or other surfaces or facades;
  - (4) Install and attach the rails to the footers or base on the roof or other surfaces or facades, unless the rails are the bonding or grounding mechanism for the solar photovoltaic system;
  - (5) Physically lay the panels on the rails;
  - (6) Install the roof, windows, skylights, facades, or other parts of a building or structure;
  - (7) Frame the building or structure; or
  - (8) Manufacture the solar photovoltaic systems and panels.
- (c) For purposes of this section, the term “solar photovoltaic systems” includes:
- (1) Rooftop solar photovoltaic systems mounted on rails; and
  - (2) All other types of solar photovoltaic systems attached or fastened to or made a part of other surfaces or facades of a building, structure, or premises (including but not limited to building integrated photovoltaics).”

- b. Tritium 3 letter asking if a licensed electrician is required to perform maintenance and repairs on photovoltaic inverter systems. (Deferred from the December 17, 2013 meeting.)

It was moved by Mr. Brady, seconded by Mr. Kaneshiro and unanimously carried to respond as follows to the questions in the Tritium 3 letter asking if a licensed electrician is required to perform maintenance and repairs on photovoltaic inverter systems:

- Qestion 1: In Hawaii, is a factory authorized technician who is not a licensed electrician (“Authorized Technician”), able to perform testing and repairs to internal inverter components and wiring located between the landing lugs for incoming AC and DC lines

without an electrician license? This includes testing and repairs to internal components that were originally fabricated and prewired by the inverter manufacturer.

Answer 1: No license is required provided no electrical wiring is removed.

Question 2: During inverter commissioning, is an Authorized Technician able to perform the work and verification necessary to complete the manufacturer's commissioning procedure? This procedure typically includes verification and operation of all inverter components including the AC and Dc lugs.

Answer 2: Yes. No license is required.

Question 3: When troubleshooting installed photovoltaic inverters, it is sometimes necessary to confirm that the torque on the lugs securing the incoming AC and DC wires are in accordance with manufacturer specifications. In Hawaii, are Authorized Technicians permitted to perform these specification checks on inverter lug torques?

Answer 3: Yes. No license required.

Question 4: It is sometimes necessary to completely replace entire photovoltaic inverters when a manufacturer determines that the device cannot be repaired. In Hawaii, is an Authorized Technician, under direction from the manufacturer, able to remove and replace an inverter in an existing PV system?

Answer 4: Yes, if there is no removal of electrical wiring.

Question 5: Many PV systems include "smart" DC combiners that monitor and report electrical characteristics to the inverters. During system troubleshooting, it is sometimes necessary to measure DC voltages and currents at various locations within a combiner box to ensure that the device is correctly reporting data to the inverter. In Hawaii, is an Authorized Technician able to perform these DC measurements at locations inside combiner boxes?

Answer 5: Yes; provided that there are no modifications to the electrical wiring.

**Chairperson Kimura left the meeting at 1:12 p.m.**

- c. Laurie Hirohata letter asking if the installation of a Wireless Control Network for accurate metering of electrical power should be done by a licensed contractor and electricians.

The Board reviewed Ms. Hirohata's letter and inquiry regarding whether a license is required to install submeter WIFI devices as described in the user manual "Power Meter PM-2104". After further discussion it was moved by Vice Chairperson Akamu, seconded by Mr. Kaneshiro, and unanimously carried based solely on the information provided in the user manual and the letter, that a license journey worker electrician or supervising electrician is required to install the power meter in residential dwellings including condominiums and/or industrial structures, as applicable, in that the electrical installations or electrical wiring will utilize more than 50 volts.

The Board further advises that in our State two licenses are required to perform electrical work and in this case the following licenses would apply:

- Electrical contractor's license from the Hawaii Contractor's License Board (C-13 Electrical Contractor); whose responsible managing employee ("RME") hold a journey worker electrician's license;
- Journey worker electrician's license to perform the electrical work. In addition, a journey worker electrician's license from the Board of Electricians and Plumbers to perform the work is required.
- If the electrical contractor or its RME does not hold the journey worker's license, the contractor must hire the appropriately licensed electricians to perform the work.

Applications:

It was moved by Mr. Kaneshiro, seconded by Mr. Akamu, and unanimously carried to approve to **approve/defer** the following applications as noted.

a. ELECTRICIANS

1. Journey Worker Electrician ("EJ") – Approved

ALLEN, David N.F.  
BATISTA, Andre R.  
DECKER, Brian E.  
DUARTE, Sanoe R.  
FRANCO, Frank  
GOMES, Thomas B.  
KAMA, Justin

KATTO, Jeffrey N.  
O'NEILL, Mark W.  
SCHROEDER, Matthew J.  
SCOLLON, John D.  
USHER, Dwayne M. - Pending receipt of license  
verification  
VASCOVICH, Bradley D.  
WEBBER, John - Pending receipt of license verification

2. Supervising Electrician ("ES") – Approved

GUZMAN, Romeo Y.  
LANTRY III, Edward T.  
NIEDERER, William

3. Journey Worker Industrial Electrician ("EJI") - Approved

None

4. Supervising Industrial Electrician ("ESI") - Approved

None

5. Journey Worker Specialty Electrician ("EJS") - Approved

WONG, Matthew

6. Maintenance Electrician ("EM")

MARQUEZ, Roneric H.

b. PLUMBERS

1. Journey Worker Plumber ("PJ") – Approved

DELA CRUZ, Camilo K.  
HALAS, Morgan  
HAYES-CULLINS, Leslie R.  
KEAWE JR., Mitchell K.  
KURASHIGE, Ryan T.  
PASCUA JR., Catalino M.  
PRATT JR., Robert  
REYES, Elena N.G.N.  
SABLAN, Shane K.  
WATANABE, Wayne

2. Master Plumber ("PM") – Approved

CULLINS, Michael – Pending correction of hours  
LACY, Steven E.



c. DEFERRED APPLICATIONS

GAVIN, David R. ((EJ)  
JACOBS, Joshua (PJ)  
KAOHI, Shannon K. (EJ)  
PRICE, Morgan (EJ)  
VELLALOS, Jeremy M. (EJ)

d. DENIALS

None.

e. RENEWALS

None

f. RATIFICATION

None

g. RESTORATION

Journey Worker Plumber ("PJ")

NALUAI, Derek

Executive Session: It was moved by Mr. Brady, seconded by Mr. Kaneshiro, and unanimously carried to enter into executive session pursuant to HRS sections 92-4 and 92-5, to consult with the Board's attorney on questions and issues pertaining to the Board's powers, duties, privileges, immunities and liabilities at 1:18 p.m.

**EXECUTIVE SESSION**

It was moved by Mr. Kaneshiro, seconded by Mr. Brady, and unanimously carried to reconvene to the Board's regular order of business at 1:32 p.m.

It was moved by Mr. Kaneshiro, seconded by Mr. Brady, and unanimously carried to approve a conditional license to Derek Naluai provided Mr. Naluai agrees to the following:

1. Comply with all of the terms and conditions of his probation in the June 3, 2011 Judgment of Conviction and Probation Sentence.
2. If he fails to comply with any term or condition of his probation, his license shall be automatically revoked without a hearing upon the Board's receipt of a letter from his probation officer that he violated the terms and

conditions of his probation. If his license is automatically revoked, he may apply for a new license after the expiration of at least five (5) years and he shall meet the licensing requirements in effect at that time.

Unfinished Business: a. Proposed 2014 Legislation

None

Act 35, SLH 2010  
University of Hawaii  
Honolulu Community  
College Approvals:

The Executive Officer reported that the University of Hawaii Community College has reviewed the course outlines and curriculum overview to assure minimum compliance under HRS chapter 448E-5 and that the following have addressed the appropriate program of study:

- ABC Hawaii, 240 Electrical EJ Compliance Program

Announcement: a. Next Applications Committee Meeting

Tuesday April 15, 2014  
9:30 a.m.  
King Kalakaua Conference Room  
335 Merchant Street, 1<sup>st</sup> Floor  
Honolulu, HI 96813

b. Next Board Meeting

Tuesday, April 15, 2014  
10:30 a.m.  
King Kalakaua Conference Room  
335 Merchant Street, 1<sup>st</sup> Floor  
Honolulu, HI 96813

Adjournment: There being no further business to discuss, the meeting was adjourned at 1:32 p.m.

Review and approved by:

Taken by:

/s/ Christine Rutkowski  
Christine Rutkowski  
Executive Officer

/s/ Christine Hironaka  
Christine Hironaka  
Secretary

CR:ch  
3/11/14

- [ X ] Minutes approved as is.  
[ ] Minutes approved with changes; see minutes of \_\_\_\_\_.