



**WHPA Existing Buildings Energy Efficiency (EBEE) Action Plan Committee & Stakeholder Charrette  
In-Person Summary Minutes (CEC Rosenfeld Hearing Room A, 1516 9<sup>th</sup> Street, Sacramento, CA)  
Meeting Theme: Outlining 5 EBEE-AP "Pathways to Implementation"  
Tuesday, July 19, 2016 (Scheduled for 8:45am – 5:00pm PDT)**

**Call to Order**

WHPA EBEE Co-Chair Liz Yager (County of Sonoma) called the meeting to order at 9:00am PDT.

**Roll Call**

The following 20 participants attended the meeting and introduced themselves.

Strategy Focus	Status	Organization	First Name	Last Name	WHPA Category	Attended
<b>Meeting Facilitators</b>						
1.5.3 Facilitator Admin	EBEE-EWG Co-Chair	County of Sonoma-PACE	Liz	Yager	Government (Other than CPUC)	P
1.5.1 Facilitator Admin	EC Co-Chair (Prior EBEE-EWG Co-Chair)	PG&E (Pacific Gas and Electric Company)	Jeanne	Duvall	California IOU	P
3.3.1 Facilitator Oversight	EBEE-EWG Co-Chair	SynergyNexGen	Barbara	Hernesman	Energy Efficiency Program Consultant	P
<b>CEC Advisors</b>						
1.5.3 Participant	CEC Advisor	CEC (California Energy Commission)	Martha	Brook	Government (Other than CPUC)	P
1.5.1, 1.5.5, 3.3.1 Participant	CEC Advisor	CEC (California Energy Commission)	David	Ismailyan	Government (Other than CPUC)	p
1.5.5 Co-Leader	CEC Advisor	CEC (California Energy Commission)	Tom	Trimberger	Government (Other than CPUC)	P
<b>CEC Guests</b>						
Output	CEC Guest	CEC (California Energy Commission)	Bill	Dietrich	Government (Other than CPUC)	P (partial)
<b>Exploratory Working Group (EWG) Members</b>						
1.5.3 CoLeader	EWG Member	Butte County	Nancy	Springer	Government (Other than CPUC)	P
1.5.5 Leader	EWG Member	CalCERTS, Inc.	Susan	Davison	Certifying Body	P
3.3.1 CoLeader	EWG Member	Charles Segerstrom Consultant	Charles	Segerstrom	Industry Consultants	P
1.5.2 Leader (with 1.5.5 Gp)	EWG Member	Indio Cooling & Heating Supply	Tim	Mann	Distributor	P
1.5.1 Leader	EWG Member	Joule Assets	Dennis J.	Quinn	Other Stakeholder	P
3.3.1 Leader	EWG Member	Tre' Laine Associates	Pepper	Hunziker	Energy Efficiency Program Consultant	P
1.5.3 Leader	EWG Member	Valley Contractors Exchange	Kate	Leyden	Contractor Association	P
<b>EBEE "Community" Committee Members</b>						
1.5.1 CoLeader	EBEE Member	IHACI	Bob	Wiseman	Contractor Association	P
<b>IOU Guests</b>						
1.5.3 Scribe	Guest	PG&E (Pacific Gas and Electric Company)	Cait	Pollock	California IOU	P
3.3.1 Scribe	Guest	PG&E (Pacific Gas and Electric Company)	Kristine	Walker	California IOU	P
<b>Guests</b>						
1.5.5 Participant	Guest	JCEEP (Joint Committee on Energy and Environmental Policy) and CSLB Board	David	Dias	Organized Labor	P
1.5.5 Participant	Guest (Compliance Chair Proxy)	CALBO	Greg	Mahoney	Codes & Standards Official (Association or Jurisdiction)	P
<b>WHPA Staff</b>						
1.5.5 Scribe	WHPA Staff	Key Marketing Group	Judy	Johnson	Other Stakeholder	P

\*\* Organization is Not a Member of the WHPA; + Individual is NOT Registered with the WHPA; <sup>(P)</sup> after last name = Member/Registrant is Pending Approval from the WHPA Executive Committee

**AGENDA**

WHPA Staff email distributed the following agenda and [Charrette webpage](#) link to the Charrette invitees prior to the meeting.

Time (PDT)	Item	Hosts/Facilitators
8:00am – 8:45am	Registration and Networking	Judy Johnson, WHPA Staff
8:45am – 9:00am	Introduction, Meeting Purpose, Agenda Review	Liz Yager and Barbara Hernesman, WHPA EBEE Co-Chairs
9:00am – 9:30am	Historical Sub-Strategy Focus Development Overview <ul style="list-style-type: none"> <li>WHPA EBEE-EWG Committee Foundation</li> <li>Sub-Strategy Focuses Foundation</li> </ul>	Judy Johnson, WHPA Staff & Jeanne Duvall, WHPA EC Co-Chair



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<b>9:30am – 10:00am</b>	Introducing the Pathways to Implementation Development Process <ul style="list-style-type: none"> <li>Logistics and Breakout Assignment</li> <li>CEC Expectations</li> </ul>	EBEE Co-Chairs & Martha Brook, CEC Advisor
<b>10:00am – 10:15am</b>	Break	
<b>10:15am - Noon</b>	Breakout Sessions: Prioritizing Recommended Actions and Drafting A, B, C Suggested Pathways to Implementation Per Assigned Sub-Strategy	Assigned EWG Leaders & IOU Scribes Per Sub-Strategy Focus
<b>Noon – 1:00pm</b>	Lunch	On Own
<b>1:00pm – 2:30pm</b>	Breakout Sessions: Flushing Out the A, B, C Suggested Pathways to Implementation Per Assigned Sub-Strategy and Preparation to Discuss Other Sub-Strategy Interrelations	Assigned EWG Leaders & IOU Scribes Per Sub-Strategy Focus
<b>2:30pm – 2:45pm</b>	Break	
<b>2:45pm – 4:30pm</b>	Review of Breakout Session Outputs <ul style="list-style-type: none"> <li>Sub-Strategy Leader Briefs on Breakout Group Findings</li> <li>Full Group Examination of Sub-Strategy Interrelations</li> </ul>	Liz Yager, WHPA EBEE Co-Chair
<b>4:30pm – 5:00pm</b>	Meeting Summary and Next Steps	Barbara Hernesman, WHPA EBEE Co-Chair & Martha Brook, CEC Advisor

**Introduction, Meeting Purpose, Agenda Review**

WHPA EBEE Co-Chairs Liz Yager (County of Sonoma) and Barbara Hernesman (SynergyNexGen) provided an overview of the day based on [Charrette Slides](#) 2 thru 10. The concern regarding “no show” members to the Charrette was noted.

Tom Trimberger with CEC noted that some at the Charrette participants have been talking frequently for a year, while others are newer to in the conversation.

**Historical Sub-Strategy Focus Development Overview**

WHPA Staff Judy Johnson provided background on WHPA based on [Charrette Slides](#) 12 thru 15. It was noted that broad industry input is of vital value to policy makers in HVAC and energy efficiency in California and beyond. The development and distribution of work products that document the input is the goal.

Based on [Charrette Slides](#) 18 thru 21, WHPA Executive Committee Co-Chair Jeanne Duvall (PG&E) provided historical perspective on the WHPA EBEE Committee and the process that led to the focus on EBEE Action Plan Sub-Strategies 1.5.1, 1.5.2, 1.5.3, 1.5.5, and 3.3.1. It was noted that connections were leveraged to bring additional stakeholder categories to the WHPA EBEE Committee in order to develop the best possible work products, the first of which was the Gaps and Barriers Analysis Work Product #1 to meet an Energy Commission deadline of July 2015.

WHPA EBEE Co-Chair Barbara Hernesman (SynergyNexGen) reported that the Co-Chairs asked the CEC for guidance on CEC expectations and focus preferences as Chapter 3 of the EBEE Action Plan is very extensive. The CEC clarified their preferred Sub-Strategy focuses for the group to work from for 2016. After prioritization surveying and discussion, the following five (5) were selected as this year’s focuses by the CEC and the WHPA EBEE Committee:

- Sub-Strategy 1.5.1: “Improve Clarity and Ease of Use:** Develop approaches to simplify implementation of BEES for existing buildings by unifying definitions with industry practice, by clarifying code requirements, and through the use of expert systems or other navigation tools.”

WHPA EBEE Co-Chair Barbara Hernesman (SynergyNexGen) reported that the above focus is also getting input from the WHPA Compliance Committee.

- Sub-Strategy 1.5.2: “Review BEES for Cost-Effectiveness:** Confirm that BEES requirements are cost-effective when applied to existing buildings using careful review, industry engagement, and BES modifications where needed.”

WHPA EBEE Co-Chair Barbara Hernesman (SynergyNexGen) reported that input on the above focus is being provided by Tom Trimberger (CEC) as well as by the WHPA HVAC Energy Savings and DEER Committee on how stakeholders define cost-effectiveness.

- Sub-Strategy 1.5.3: “Training and Communication:** Enhance communication, education, and interactions with Local Governments to facilitate compliance and enforcement with Standards.”



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4. **Sub-Strategy 1.5.5: “Understand the compliance shortfall:** Work with Local Governments (LG), manufacturers, and contractors to determine compliance gap and understand the role of permitting, and the needs of buildings departments.”

WHPA EBEE Co-Chair Barbara Hernesman (SynergyNexGen) commented that the above is an enormous conversation across the state. “All of us have a role to make this work better.” The work will need to be done in stages. Asked: “Where will the money come from?”

5. **Sub-Strategy 3.3.1: “Priority sectors, systems, and workforce categories:** Using expert panels, set priorities for the building segments most likely to scale up soon for efficiency adoption, and identify which building systems and trades need the most improvement.”

WHPA EBEE Co-Chair Barbara Hernesman (SynergyNexGen) reported that the above focus is through the lens of HVAC. She noted that along with others, Charles Segerstrom (Consultant) has been “in this group” as a leader for more than three (3) years, that Pepper Hunziker (Tre’Laine) is doing this work within the utilities for SCE, that Barbara Hernesman (SynergyNexGen) has been working on the WE&T focus for 9 years, and that Kristine Walker has been “working on this” for PG&E.

### **Introducing the Pathways to Implementation Development Process**

#### CEC EXPECTATIONS

Martha Brook (CEC) reported on CEC’s expectations and commented on two (2) major pieces of legislation.

- **SB 350:** The Energy Commission has a target on how to double energy efficiency in California. The PUC is supposed to direct the IOUs and the ED is to direct the POUs to integrate the goals into their plans. CEC is now working with the PUC to integrate the targets. “We want the targets to be real, cost-effective and feasible. We want to know from this group what can we get out of the HVAC sector. How can we go big and at least double the efficiency in the HVAC sector by 2030?”
- **AB802:** This is considered a big focus because of its emphasis on code compliance and new direction to meet the customer where s/he is and efforts to try to move the customer to improve energy efficiency over time. “We can now pay ratepayer funds to help the market move along that trajectory. A focus on meter-based savings is part of this.” The need to measure the savings from efficiency and not looking in a table for deemed measure was noted. Metering technology should be used to track savings over time. CEC “would love for you in this room to figure out how this can be integrated into your business model.”

It was noted that the Legislature agreed on budget to redirect funds for the local government challenge program and to include energy efficiency in existing buildings programs. The key is to figure out what everyone needs and funding for innovation. Some funds may be allocated to some things that are critically important, while others may be funds to local governments for innovation.

The CEC would like to see work product “from this group” to inform the Action Plan and business plans of the IOUs over the next six (6) months.

Regarding AB802, WHPA Executive Committee Co-Chair Jeanne Duvall (PG&E) commented on profiling of existing businesses and targeted customer service reps and a pilot in August for quality maintenance. They will be able to do existing actual measurements and will measure both before and after.

Tom Trimberger (CEC) noted that the Action Plan has “good intentions”, but that the focus is now on how to make it work. “We are on the leading edge. This output will be very valuable for a lot of people.”

Jeanne Duvall (PG&E) clarified that she is part of PG&E commercial, but that she will take the Charrette information back to the residential side as well, while also noting that it must be cost effective.

#### BREAKOUT SESSION EXPECTATIONS

WHPA EBEE Co-Chair Liz Yager (County of Sonoma) explained the logistics for the Sub-Strategy focused breakout sessions, confirmed breakout session assignments, provided guiding questions, and introduced a suggested output template based on [Charrette Slides](#) 26 thru 38.

WHPA EBEE Co-Chair Barbara Hernesman (SynergyNexGen) instructed that each Sub-Strategy has a basket of recommended actions, but not all have to be included in the “Pathways to Implementation”. The basket would go to the CEC and the IOUs with



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request for them to review and determine what they think they would do with the recommendations and then return their comments “back to us”.

The day’s task was reported as trying to put together a one-page sheet using the following categories for each Sub-Strategy focus:

- Recommendation
- 5-7 high level process steps for implementation
- Milestone and timeline(s)
- Performance metrics for the actual project plan to know it is working
- Parties (suggested) as responsible for implementation
- Cost-considerations (budget estimate)
- High-impact uncertainties to consider (risks and assumptions)
- Plan B (if there is an obvious secondary pathway)

The morning session focus was reported as being on prioritizing the recommended actions and drafting A, B, and C suggested pathways for implementation. The afternoon session focus was reported as being on getting into more detail and also on consideration of interrelations across Sub-Strategies.

Martha Brooks (CEC) clarified that in order to impact 2019, “we have to start immediately.” Tom Trimberger (CEC) added that “we cannot influence anything before 2019”, but that “we can influence 2019 and beyond.” David Ismailyan (CEC) reminded that the CEC advisors are there to assist in answering any questions, including providing research that is needed to help development of a pathway.

**Review of Breakout Session Outputs**

The Sub-Strategy leaders reported on the breakout group findings.

**SUB-STRATEGY 1.5.1**

Dennis Quinn (Joule Assets) presented an overview of the content in *Appendix A: Sub-Strategy 1.5.1 Output Notes (pages 10-11 below)* developed by the Sub-Strategy 1.5.1 breakout group and clarified priority focus on the following recommended actions for pathway to implementation development after vetting the base [Sub-Strategy 1.5.1 Worksheet Final as of 7-12-2016](#).

1.5.1 Improve Clarity and Ease of Use: Develop approaches to simplify implementation of BEES for existing buildings by unifying definitions with industry practice, by clarifying code requirements, and through the use of expert systems or other navigation tools.	
	<b>1.5.1 Recommended actions</b>
R1	Combine all codes and standards references related to BEES into a common database with appropriate cross referencing for access by Stakeholders.
R2	Assign liability and responsibility to the Owner for Code Compliance (with some responsibility by Contractor and Engineer).
R3	Incorporate QR code (or similar) to be scanned through transaction process: distributor, contractor, Inspector and Owner (to confirm history, assuming they are responsible).
R4	Single source permit for installation for HVAC change-out (similar to solar industry) for use in Residential and small commercial. Easier to develop and use online execution.
R5	Self-certification for Title 20 and 24, including high efficiency equipment with QR/barcode/FDD. (pilot as a milestone and timing)
R6	Distributors sell only to licensed contractors (variation that contractor must demonstrate T24/T20 training) Statewide permitting*

There was no direct discussion about the presented information.

The related Charrette Output Template (in Excel format) is available at: [1.5.1 WHPA EBEE Charrette Output “Improve Clarity and Ease of Use”](#)

**SUB-STRATEGY 1.5.2**

WHPA Staff Note: To ensure more thorough vetting discussion, Sub-Strategy 1.5.2 was combined with the Sub-Strategy 1.5.5 breakout group.

Tim Mann (Indio Cooling and Heating Supply) presented an overview of the Sub-Strategy 1.5.2 breakout group’s work clarifying priority focus on the following recommended actions for pathway to implementation development after vetting the base [Sub-Strategy 1.5.2 Worksheet Final as of 7-12-2016](#).



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1.5.2 Review BEES for Cost-Effectiveness: Confirm that BEES requirements are cost-effective when applied to existing buildings using careful review, industry engagement, and BEES modifications where needed.	
	<b>1.5.2 Recommended actions</b>
in	1. Factor the costs of administration and enforcement of standards, the cost of industry installation and compliance, the cost of M&V, and dealing with market confusion since stakeholders (consumers, contractors, building departments/budgets) consider these factors important.
in	4. Write standards that are enforceable, not just cost effective.
in	7. Articulate why building efficiency is a health and safety issue within the code, not just "saving energy".
in	10. To address the influence of code writing and cost effectiveness calculations by regulators, engineers and building officials focused on new construction, often less familiar with the techniques used in remodeling existing structures, include people from the manufacturing, contracting and building official communities, the people who provide and install the equipment and material used to retrofit existing buildings, for developing information dependent on accurate costs and resulting energy savings data.

The following overarching comments were presented in relation to Sub-Strategy 1.5.2:

1. Is this lens of “cost-effectiveness” the appropriate strategy to take to the larger market?
2. Currently cost-effectiveness is a function of the CEC, CPUC and IOUs.
3. Is cost-effectiveness an appropriate lens for other stakeholders and players in the market?
4. This group proposes ‘value’ is the more appropriate term, and that Sub-Strategy 1.5.5 is for ‘value’ strategies. Value exceeds monetary considerations.

The breakout group suggested the following recommendations regarding cost-effectiveness for Sub-Strategy 1.5.2:

1. Have credibility in the standards; ensure cost effectiveness is visible and tangible.
2. Users recognize the value of the energy efficiency savings and code.
3. Establish real world standards, not just concepts. Think: “What do regular folks do?”

In terms of the recommended process steps for cost-effectiveness, (also in Sub-Strategy 1.5.5 below), the breakout group suggested a primary focus on changing the conversation from “cost-effectiveness” to “value”.

1. STEP- Define cost-effectiveness for the decision-maker.
  - a. ISSUE – “Cost-effectiveness” has been defined by IOUs, CPUC and CEC, but is it meaningful for the consumer? The consumer does care about value.
2. Is this lens of cost-effectiveness, what is the appropriate strategy to take to the larger market?

There was discussion about “cost effectiveness” being a policy-makers word, but that with the end markets of contractors and consumers other “selling” phrases should be used, such as value, ROI, or perhaps even cost-effectiveness. The importance of not being limiting in the “selling” vocabulary was also noted as was the clarification that value varies by the buyer.

Martha Brooks (CEC) commented that currently there are very aggressive “aspirational” models with no compliance. She suggested that more energy would be saved with lower standards and lots of compliance and then incentive programs.

Susan Davison (CalCERTS) agreed that “we have made it too complex and then pushed it into the market.” She also reiterated that “cost effectiveness” is a useful term in policy circles, but not with end users, such as consumers and contractors.

Pepper Hunziker (Tre’Laine) commented that “if we don’t get humble and acknowledge where we are, we won’t get anywhere.”

Tom Trimberger (CEC) commented on the need for standards that are credible and “realistic to real people”.

Charles Segerstrom (Consultant) noted the need to have fees (or funding source) so that building departments can rebuild the staffs they lost in the recession.

*The related Charrette Output Template (in Excel format) is available at: [1.5.2 WHPA EBEE Charrette Output “Review B.E.E.S. for Cost-Effectiveness”](#)*

**SUB-STRATEGY 1.5.3**

Kate Leyden (Valley Contractors Exchange) presented an overview of the Sub-Strategy 1.5.3 breakout group’s work on the following recommended actions for pathway to implementation development after vetting the base [Sub-Strategy 1.5.3 Worksheet Final as of 7-12-2016](#).



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1.5.3 Training and Communication: Enhance communication, education, and interactions with Local Governments to facilitate compliance and enforcement with Standards	
	<b>1.5.3 Recommended actions</b>
in	1. Support the development of the communication pathway in education and outreach from the building department through the health department to the community in the communication of the benefits of EE and building performance and therefore the values of permit compliance. Ensure Health department validation of HVAC contractor delivery of value for family/place of business health.
in	2. Support the implementation of quarterly community engagement activities in each IOU territory where the community is invited to pre-release of new manufactured technologies in exchange for listening to community members.
in	3. Properly source* funding and resources to bring project management and continuous process improvement into the base competency set of skills of local government employees.
in	4. Encourage proper funding to local governments for focus on both energy efficiency in the market as well as on what is needed for health and safety.
in	5. Identify the proper source* of additional funding to upgrade departments by reinstating what may have been lost in the last construction downturn.
in	6. Advertise sale and cost of noncompliance.
in	7. Integrate public and private efforts along mutual mission goals and objectives. (See the State Energy Efficiency Collaborative conference 2016 conference material, assessment tool.)
in	8. Encourage the use of CEUs to support and add value to training for Building Officials.

Liz Yager (County of Sonoma) commented that rather than public “shaming ‘of non-compliant contractors as suggested earlier, there could perhaps be a statewide portal for “good” contractors, those filing and completing permits.

Pepper Hunziker (Tre’Laine) commented that there should be PSA (Public Service Announcements) around HVC code compliance.

Bob Wiseman (IHACI) noted that Home Depot is a competitor to most contractors so it is not appropriate for public information to be placed in big box stores.

It was noted that energy is not considered fire/life/safety, so it is a lower priority for building departments. In reply to the comment that one idea is to pull it out with energy/sustainability/Green as in Texas, but maybe start as a regional approach for acceptance, Liz Yager commented that her organization has that with an Energy and Sustainability Division in the County of Sonoma.

Martha Brooks (CEC) commented that the Prop 39 program focus on schools will go away soon and that the legislature will decide where funding goes next, if anywhere.

*The related Charrette Output Template (in Excel format) is available at: [1.5.3 WHPA EBEE Charrette Output “Training and Communication”](#)*

**SUB-STRATEGY 1.5.5**

Susan Davison (CalCERTS) and Tom Trimberger (CEC) presented an overview of the Sub-Strategy 1.5.3 breakout group’s work on suggested milestones and the following recommended actions for pathway to implementation development after vetting the base [Sub-Strategy 1.5.5 Worksheet Final as of 7-12-2016](#). The uncertainties to take into consideration were also briefly discussed.

1.5.5 Understand the compliance shortfall: Work with Local Governments (LG), manufacturers, and contractors to determine compliance gap and understand the role of permitting, and the needs of buildings departments.	
	<b>1.5.5 Recommended actions</b>
in	2. Advertise scale and cost of noncompliance.
in	4. Support the design and use of automated and wireless tools and technologies that facilitate and simplify the permitting process at the HVAC contractor level. Encourage tools that align with building department activities.
in	6. Facilitate the transformation of existing building department workforce to care about energy efficiency (give a darn)
in	7. Identify workforce competencies and knowledges, skills and abilities (KSAs) and appropriate industry credentialing for BEES, codes, standards and compliance.
in	9. Engage private and public industry, education, and workforce investment boards and local government.
in	12. Engage HERS providers to analyze data to identify jurisdictions’ level of compliance and provide funding to support and expand tools and programs to raise compliance levels.

The breakout group suggested the following recommendations regarding the compliance shortfall for Sub-Strategy 1.5.5:

1. Get Building Departments, consumers, and contractors to value energy efficiency compliance.
2. Use technology and training to move the market.
3. Use the “carrot and stick” methodology for compliance.



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The breakout group suggested the following brainstormed recommendations regarding Building Department (BD) value for Sub-Strategy 1.5.5 (copied from presentation notes):

1. **STEP - HERS providers give data to building departments, ranking energy compliance.**
  - a) HOW – There is data already online.
2. **STEP – Marketing on the value and cost of non-compliance and the cost to homeowners.**
  - a) HOW – Give BD personnel continuing education units (CEUs).
  - b) HOW – Two days of training for BD personnel, including “boots on ground”, and given CEUs. Day 2 give examples. “How to” training. CEUs and mandatory training.
    - i) **ISSUE- Energy efficiency is not written in the same language/ format as other code areas, to be presented in ways consistent with other building codes.**
    - ii) **ISSUE-** Stop changing code every 3 years.
    - iii) **ISSUE-** Energy is written in the language of the agency engineering writers, not the building people, so it is hard for BD people to learn.
    - iv) **ISSUE -** Materials need to be in simple forms and with simple trigger sheets. There is a navigational issue.
  - c) **HOW-** The training materials need to be written in a manner that is easier to learn.
  - d) **HOW – Develop a financial structure for the cities to facilitate this.** Case study. How to support BD and pay for itself over time (reference City of Davis).
    - i) **ISSUE -** The State keeps adding regulations to building standards but do not fund it.
3. **STEP – Write standards in a manner that is understandable and enforceable** (The law is written but no enforced; partly this is because the code is difficult to understand so it is not enforced.)
  - a) **HOW –** Do HERS verification on every project.
  - b) **QUESTION-** Is the Building Department supposed to be the verifier?
  - c) **QUESTION –** How do we solve the complexity that we created by creating HERS raters?
  - d) **ISSUE –** There is a need for collaboration of all the parties working together.
  - e) **OPINION-** There will be sensors on everything and the data collection will be huge.
4. **STEP – Get real data on what is going on with compliance.** Determine how much have HERS raters impacted energy efficiency. HERS raters do 10,000 units of 300,000 units a year.

The breakout group’s brainstormed suggestions for the recommended process steps for consumer value overall for Sub-Strategy 1.5.5 follow:

- a) **SUPPORTING STEP –** Need marketing and outreach
- b) **SUPPORTING STEP –** The “stick”. Davis model; City of Beverly Hills. If a contractor opens a permit and does not close it, the BD is proactive to the contractor and higher fees. Technology – your permit expires in 30 days.
- c) **SUPPORTING STEP-** The “stick”. Davis model; Consumers - catch when sell the house. Lien the house; put on property taxes.
2. **STEP –** Tie the IOU program rebate so that no rebate until the closed permit is shown (pull/close).
  - a) **ISSUE-** the IOUs don’t do this because they say “it’s not health and safety”. Why would you create a program that does not comply with the law?
3. **STEP-** Educate a consumer that if they use an unlicensed contractor, anyone injured on the job is the homeowner’s responsibility.
4. **STEP-** Can a home inspection at time of sale include permits in their investigation?
  - a) **ISSUE –** if the home inspector finds non-compliance and delays the sale, the Realtor won’t hire them again.

The breakout group’s brainstormed suggestions for the recommended process steps for contractor value overall for Sub-Strategy 1.5.5 follow:

1. **STEP –** Level the playing field; don’t allow unlicensed unpermitted work for cheaper.
  - a) **ISSUE-** There is no penalty for unlicensed work.
2. **STEP –** Use new technology ....
  - a) to simplify the permit process
  - b) to simplify verification
  - c) for serial number tracking
3. **STEP –** Make the standards simpler for contractors.
4. **STEP –** Certification
5. **STEP –** Make it easier to turn in unlicensed contractors.

The related Charrette Output Template (in Excel format) is available at: [1.5.5 WHPA EBEE Charrette Output “Understand the compliance shortfall”](#)



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**SUB-STRATEGY 3.3.1**

Pepper Hunziker (Tre’Laine) presented an overview of the Sub-Strategy 3.3.1 breakout group’s work clarifying priority focus on the following recommended actions for pathway to implementation development after vetting the base [Sub-Strategy 3.3.1 Worksheet Final as of 7-12-2016](#).

3.3.1 Priority sectors, systems, and workforce categories: Using expert panels, set priorities for the building segments most likely to scale up soon for efficiency adoption, and identify which building systems and trades need the most improvement.	
<b>3.3.1 Recommended actions</b>	
1.	Access: Increase geographical and socio-economical reach. Increase access for working families, etc.
2.	HVAC Pipeline: k-12, Post-secondary Adult, Continuing, Incumbent
3.	IOU Business Plan and PTLM Support to increase cost effectiveness, energy efficiency and measured performance.

The related Charrette Output Template (in Excel format) is available at: [3.3.1 WHPA EBEE Charrette Output “Priority sectors, systems, and workforce categories”](#).

**SUB-STRATEGY INTERRELATIONS**

By general consensus agreement, the Charrette participants agreed to forgo the planned full group Sub-Strategy interrelations’ discussion.

**Meeting Summary and Next Steps**

WHPA EBEE Co-Chair Barbara (SynergyNexGen) provided an overview of the next steps for “Mobilizing for Action through Planning and Partnerships” (MAPP) based on [Charrette Slides](#) 56 thru 60.

- The impact hoped for “through this group is to mobilize action in our communities”.
- After the output reports are distributed, each attendee should take them back to their own organization and see if they can use it to mobilize, and find out what they have to say.

**ACTION:** Each Committee member to bring back feedback so the Charrette recommendations can be packaged and given to the CEC to see what can be used in the EBEE Action Plan.

- Other WHPA Committees, like Compliance, will take the input from the Charrette to their members. There will also be direct calls amongst the collaborative WHPA Committee Chairs.

Martha Brook (CEC) reported that there are five or six things the CEC could contribute through focus activities. CEC has tech support dollars with \$500K to be spent on HVAC over the next year. Martha will be commissioning the tech support work within the next few weeks. She suggested asking “this group” to help prioritize possibilities.

**ACTION –** Martha Brook (CEC) to provide her 5 or 6 Charrette takeaways to Tom Trimberger (CEC) who will pass them along to the WHPA EBEE leaders.

**ACTION:** The Charrette Breakout Session Leaders to put their finds into the Charrette template format and email it to WHPA Staff by close of business on July 26, 2016.

**Adjournment**

Based on general consensus agreement, the WHPA EBEE Co-Chairs adjourned the meeting at 4:30 pm PDT.

\* \* \* \* \*

**Summary of Action Items and Key Decisions (from above discussion)**

1. **ACTION:** Each Committee member to bring back feedback so the Charrette recommendations can be packaged and given to the CEC to see what can be used in the EBEE Action Plan.
2. **ACTION –** Martha Brook (CEC) to provide her 5 or 6 Charrette takeaways to Tom Trimberger (CEC) who will pass them along to the WHPA EBEE leaders.
3. **ACTION:** The Charrette Breakout Session Leaders to put their finds into the Charrette template format and email it to WHPA Staff by close of business on July 26, 2016.



**WHPA Existing Buildings Energy Efficiency (EBEE) Action Plan Committee & Stakeholder Charrette  
In-Person Summary Minutes (CEC Rosenfeld Hearing Room A, 1516 9<sup>th</sup> Street, Sacramento, CA)  
Meeting Theme: Outlining 5 EBEE-AP “Pathways to Implementation”  
Tuesday, July 19, 2016 (Scheduled for 8:45am – 5:00pm PDT)**

**APPENDIX A: Sub-Strategy 1.5.1 OUTPUT NOTES**

<b>WHPA</b>	<b>19-Jul-16</b>	<b>(Jeanne Duvall; Bob Wiseman; Dennis Quinn)</b>	
Sub strategy:		1.5.1 Improve Clarity and Ease of Use: Develop approaches to simplify implementation of BEES for existing buildings by unifying definitions with industry practice, by clarifying code requirements, and through the use of expert systems or other navigation tools.	
Recommendation [R]	R1	Combine all codes and standards references related to BEES into a common database with appropriate cross referencing for access by Stakeholders:	
	R2	Assign liability and responsibility to the Owner for Code Compliance (with some responsibility by Contractor and Engineer)	
	R3	Incorporate QR code (or similar) to be scanned through transaction process: distributor, contractor, Inspector and Owner (to confirm history, assuming they are responsible)	
	R4	Single source permit for installation for HVAC change-out (similar to solar industry) for use in Residential and small commercial. Easier to develop and use online execution.	
	R5	Self-certification for Title 20 and 24, including high efficiency equipment with QR/barcode/FDD. (pilot as a milestone and timing)	
	R6	Distributors sell only to licensed contractors (variation that contractor must demonstrate T24/T20 training) Statewide permitting*	
Milestones and Timing	R1	1	ACE (but Statewide) - Title 20 and 24 websites with ACE Tools, ACE Forms, Installation Techniques - developed by IOUs (energycodeACE.com)
	R1	2	Statewide Energy Efficiency Const. Portal ("Portal") - Development of comprehensive site encompassing codes, standards, permitting, incentives, building codes, etc.
	R1	3	Incorporate applicable UNC building codes
	R1	4	ASHRAE, ACCA standards to be expanded into Portal
	R1	5	Links to City Building Departments and their local requirements - phone number to landing page
	R1	6	Link to training for codes and standards and high efficiency programs sponsored by IOUs
	R1	7	Registered users have access to (or discounts for) training and 3rd party inspections
	R1	8	Access to DEER database, which includes listing of high efficiency equipment
	R1	9	incorporate language options
	R1	10	If single-source permit - can go to Permit Landing Page on the ACE website
	R1	11	Link to contractor licensing sites to check contractor licensing status
	R1	12	Link to utility incentive programs
	R5	13	Self-certification with random inspections [30%] with those failing losing self-certification credentials Training for Self-Certification credentials. Those failing inspections lose credentials until retrained (or similar probation)
	R5	14	probation)
	R5	15	Self-certification for eligible high efficiency equipment
	R2	16	Customer confirms that final permit has been provided
	R2	17	Research enabling laws and regulations to determine how this can be initiated (State Insurance Board; Insurance industry)
	R4	18	Research solar permitting process for applicability of mirroring approach
	R5	19	Implementing agency initiates state-wide self-certification program
	R6	20	Research enabling laws and regulations to determine how this can be initiated
	R6	21	Draft enabling legislation
	R6	22	Put implementation processes in place
Performance Metrics	R1		Increase permit filing and closing by [10%]
	R5		How many self-certified contractors
	R1		Website traffic
	R1		How many contractors register to website
	R1		Survey results
			Resp. Pty.
Roles/Players/Responsible Parties (assign Stakeholders as responsible/participant/ etc.)	R1;	Stakeholders:	Contractors
	R1		Utilities
	R1;		Code Officials
			Inspectors
	R3-6		State Agencies
	R2		Owner (Business and Homeowner)
	R2		CSLB
	R2		Dept of Insurance
Timelines	R1		One year from commencement
	R2		Six months to determine plan and cost of implementation
	R3		Six months to gain Stakeholder feedback



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- R3 Four years from launch to adoption by participating manufacturers/distributors (?)
- R3 9 months to establish detailed plan
- R3 6 months for training of Stakeholders
- R4 9 months to research leverage solar permitting process
- R4 One year for Stakeholder input/feedback
- R5 6 months for Governor’s Office of Planning and Research to initiate
- R5 One year to determine implementing agency and implement
- R6 Research enabling laws and regulations to determine how this can be initiated
- R6 Draft enabling legislation
- R6 Put implementation processes in place

Cost/Resources Open-source development of the Portal - % funding by CEC, IOUs, CCEs, Munis, PUDs  
IOUs - provide ACE and incentive access