



# WHPA Existing Buildings Energy Efficiency Action Plan Committee (EBEE) Meeting

Thursday, July 28, 2016

## AGENDA:

- Roll Call – 5 min
- Co-Chair’s Opening Comments – 5 min
- Charrette Overview and Discussion – 30 min
- Next Steps – 15 min
- Wrap Up and Adjournment – 5 min

## For Telephone access:

1. Dial 1-641-715-3670
  2. Enter Participant Access Code: **797856#**
- Announce yourself and organization when speaking.
  - Mute when not speaking.
  - Use \*6 to take on/off mute thru FC.com if needed



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# ROLL CALL (Invitee List Shown) – WHPA Staff (5 min)

- CEC Advisors and Guests (Non-Voting)
  - Advisors: **Tom Trimberger, David Ismailyan, Martha Brook**
  - Guests: **Bill Dietrich, Jeff Miller, Heriberto Rosales**
  
- EBEE Committee Co-Chairs (Voting)
  - SynergyNexGen: **Barbara Hernesman** (Energy Efficiency Program Consult.)
  - County of Sonoma – PACE: **Liz Yager** (Government – Other than CPUC)
  
- EWG Members (Voting)
  - AirTest: **Mike Schell** (HVAC Manufacturer)
  - Air-Tro: **Robert Helbing** (Contractor – Nonresidential)
  - Butte County: **Nancy Springer** (Government – Other than CPUC)
  - CalCERTS, Inc.: **Susan Davison** (Certifying Body) – *Voting Proxy*
  - Consultant: **Charles Segerstrom** (Industry Consultants)
  - Honeywell ECC: **Mike Lawing** (Controls – Manufacturer or Distributor)
  - Indio Cooling & Heating Supply: **Tim Mann** (Distributor)
  - Joule Assets: **Dennis J Quinn** (Other Stakeholder)
  - NCI: **Mel Johnson** (Educator, Trainer)
  - Tre'Laine Assoc.: **Pepper Hunziker** (Energy Efficiency Program Consultant)
  - Valley Contractors Exchange: **Kate Leyden** (Contractors Assn)



# ROLL CALL (Invitee List Shown) – WHPA Staff (5 min)

- EBEE “Community” Committee Members (Non-Voting)
  - AHRI: **Garrett McGuire** (HVAC Manufacturer Association)
  - AMS: **Mark Pickett** (Contractors Nonresidential)
  - Amy Beley Consulting: **Amy Beley** (Energy Efficiency Program)
  - Benningfield Group: **Lynn Benningfield** (Energy Efficiency Program Consult)
  - Big Ass Solutions: **Don Dodd** (HVAC Manufacturer)
  - Brand Cool Marketing, Inc.: **Sarah Gibson** (Other Stakeholder)
  - CCC: **Donald Frey** (Energy Efficiency Organization)
  - CCCCCO: **Jim Caldwell** (Educator, Trainer)
  - CLW Enterprises: **Corey Lee Wilson** (Energy Efficiency Program)
  - Daikin US Corp: **Charlie McCrudden** (HVAC Manufacturer)
  - Efficiency First California: **Charles Cormany** (Contractor Association)
  - Green Link Mechanical: **Jerry Hernandez** (Contractor – Nonresidential)
  - Home Energy Magazine: **Tom White** (Media)
  - HVACRedu.net: **Chris Compton** (Educator, Trainer)
  - IHACI: **Bob Wiseman** (Contractor Association)
  - Irvine Valley College (Saddleback): **Len Pettis** (Educator, Trainer)
  - LATTCC: **Benjamin Goldstein** (Educator, Trainer)
  - Marina Mechanical: **Jim Hussey** (Contractor – Nonresidential)
  - Munters Corp: **Hua Zhang** (HVAC Manufacturer)
  - NCI: **Justin Bright, Benjamin Lipscomb** (Educator, Trainer)



# ROLL CALL (Invitee List Shown) – WHPA Staff (5 min)

- EBEE “Community” Committee Members (Non-Voting) – continued
  - Selby Energy: **Brian Selby** (Educator, Trainer)
  - TRC Solutions: **Cathy Chappell** (Other Stakeholder)
  - UC Davis EEC: **Kristin Heinemeier** (Research Organization)
  - Valley College: **James Caskey** (Educator, Trainer)
  - Villara Building Systems: **Rick Wylie** (Contractor – Residential)
  
- Utility Members (Non-Voting)
  - LADWP: **Margarita Alvarado** (Publicly Owned Utility)
  - PG&E: **Jeanne Duvall** (California IOU)
  - SCE: **Lori Atwater, Matthew Horwitz, Bach Tsan** (California IOU)
  - SDG&E: **Jeremy Reeve** (California IOU)
  - SoCalGas: **Joe Shiau** (California IOU)
  
- Collaborative WHPA Committee Chair Guests (Non-Voting)
  - ASHRAE: **Rick Danks** (Engineering Society) – ES&DEER
  - CALBO: **Bob Barks** (Codes & Stds Official Assn/Jurisdiction) – Compliance
  - SCE: **Jake Huttner** (California IOU) – WE&T
  
- WHPA Staff
  - InfoPlast: **Wendy Worrell** (Other Stakeholder)



# Co-Chairs' Opening Comments (5 min)

## ▶ Agenda

	Agenda item	Activity	Outcome	Time
1.	Roll Call	WHPA Staff will call the roll	Attendance recorded	5 min
2.	Co-Chairs' Opening Comments	Chairs will provide open comments, clarify agenda, and review recent events.	Critical direction and updates provided. Meeting participants reminded to identify themselves and which Sub-Strategy they are commenting on.	5 min
3.	Charrette Overview and Discussion	Chairs will provide an overview of the main events and content summary of the July 19 <sup>th</sup> WHPA EBEE and Stakeholder In-Person Charrette. Sub-Strategy Leadership will provide additional "Quick Snapshot" comments about their take-away from the Charrette.	An overview is shared with the focus on knowledge base development and collecting direct Committee input on the Sub-Strategy breakout session summary content from the July 19 <sup>th</sup> In-Person Charrette. Committee engagement is highest in the agenda item.	15 min Chair  15 min Sub-Strategy Leaders
4.	Next Steps	Chairs will outline the next steps and committee commitments for the next month	Clarification of the next steps for Committee members to take to continue development of the Sub-Strategy "Pathways to Implementation" Roadmap will be presented and understood.	15min
5.	Wrap up and Adjournment	WHPA Staff will: <ol style="list-style-type: none"> <li>Provide data and times for upcoming meetings</li> <li>Adjourn the meeting at 10:00 am Pacific</li> </ol>	Information on coming events shared. Confirmation of next meetings as: <ul style="list-style-type: none"> <li>Invite Only Cross-Committee Chairs: Aug 3<sup>rd</sup> at 12pm PDT</li> <li>EWG Meeting: Aug 4<sup>th</sup> at 9am PDT</li> <li>EBEE Meeting: Aug 18<sup>th</sup> at 9am PDT</li> </ul>	5 min



# CHARRETTE PARTICIPANTS ...

## You were very successful! Thank you!

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

NOTE: Other Stakeholder Category invitees were unable to attend.







# WHPA EBEE-AP Project Status

**WHPA EBEE and Stakeholders In-Person Charrette  
held at CEC on July 19, 2016  
Co-Chairs Barbara Hernesman and Liz Yager**

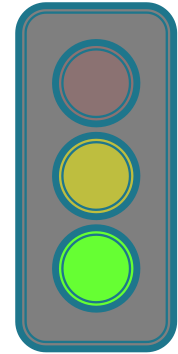


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## ◀ Status Summary

- ▶ Pathways-to-Implementation WPII on track
- ▶ Draft Charrette result pathways due to the EC by Aug 15<sup>th</sup> for review and CEC escalation approval consideration
- ▶ Goal: Deliver draft Charrette result pathways to the CEC in time for their Update review





## Recent Achievements and Progress

- ✓ CEC EBEE-AP Staff identified priority Sub-Strategies for WHPA EBEE-EWG and “Community” Committee
- ✓ CEC EBEE-AP Staff provided internal “Brain-dump” for each prioritized Action-Plan Sub-Strategy
- ✓ WHPA EBEE-EWG Committee provided additional stake holder input, and WPPII “recommended action” worksheets per Sub-Strategy for “Pathways-to Implementation” goals
- ✓ The Highlight Effort: July 19<sup>th</sup> WHPA EBEE & Stakeholder in-person Charrette at CEC!!!



# Charrette Sub-Strategy Breakout Session Leaders

- ▶ **Sub-Strategy 1.5.1**
  - Leader: Dennis Quinn (Joule Assets)
  - Co-Leader: Bob Wiseman (IHACI)
- ▶ **Sub-Strategy 1.5.2**
  - Leader: Tim Mann (Indio Cooling & Heating Supply)
- ▶ **Sub-Strategy 1.5.3**
  - Leader: Kate Leyden (Valley Contractors Exchange)
  - Co-Leader: Nancy Springer (Butte County)
- ▶ **Sub-Strategy 1.5.5**
  - Leader: Susan Davison (CalCERTS)
  - Co-Leader: Tom Trimmerger (California Energy Commission)
- ▶ **Sub-Strategy 3.3.1**
  - Leader: Pepper Hunziker (Tre'Laine Associates)
  - Co-Leader: Charles Segerstrom (Consultant)





# Charrette Outputs

Sub-Strategy Recommendation Overviews  
and  
Quick Example Snapshots



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## 1.5.1 Improve Clarity and Ease of Use:

Develop approaches to simplify implementation of B.E.E.S. for existing Bldgs. By unifying definitions with industry practice, by clarifying code requirements, and through the use of expert systems or other navigational tools.

### Recommendations as follows:

1. Combine all codes and standards references related to BEES into a common database with appropriate cross referencing for access by Stakeholders.
2. Assign liability and responsibility to the Owner for Code Compliance (with some responsibility by Contractor and Engineer)
3. Incorporate QR code (or similar) to be scanned through transaction process: distributor, contractor, Inspector and Owner (to confirm history, assuming they are responsible).
4. 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.
5. Self certification for Title 20 and 24, including high efficiency equipment with QR/barcode/FDD. (Pilot as a milestone and timing)
6. Distributors sell only to licensed contractors (variation that contractor must demonstrate T24/T20 training).

Statewide permitting\*

▶ *Note: See 1.5.1 worksheet for additional information.*



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### Quick Example Snapshot

- ▶ *Note: See 1.5.1 worksheet for additional information.*



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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.

### Recommendations as follows:

1. Change the conversation from “cost effectiveness” to value. Consumers do care about value.
2. 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.
3. Write Standards that are enforceable, not just cost effective. Credibility in Standards; cost effectiveness is visible and tangible.
4. Articulate why building efficiency is a health and safety issue within the code, not just “saving energy”.
5. Real world Standards not just concepts “What do regular folks do”? Address the influence of code writing and cost effectiveness calculations by regulars, engineers and building officials focused on new construction, and often less familiar with real-world techniques used in retrofitting/remodeling existing structures. Include manufacturing, contracting and building official communities when writing codes. People who provide and install equipment and materials used to retrofit existing buildings are your pipeline for dependent information, accurate costs and resulting energy savings data.

▶ *Note: See 1.5.2 worksheet for additional information.*



## 1.5.2 Review BEES for Cost-Effectiveness:

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### Quick Example Snapshot

- ▶ *Note: See 1.5.2 worksheet for additional information.*





## 1.5.3 Training and Communications:

Enhance communications, education, and interactions with Local Governments to facilitate compliance and enforcement with the Standards

### Recommendations as follows:

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.
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.
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.
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.
5. Identify the proper source of additional funding to upgrade departments by reinstating what may have been lost in the last construction downturn.
6. Advertise sale and cost of noncompliance.
7. Integrate public and private efforts along mutual mission goals and objectives. (See the State Energy Efficiency Collaborative conference 2016 conference material, assessment tool.)

▶ *Note: See 1.5.3 worksheet for additional information.*



## 1.5.3 Training and Communications:

Enhance communications, education, and interactions with Local Governments to facilitate compliance and enforcement with the Standards

### Quick Example Snapshot

- ▶ *Note: See 1.5.3 worksheet for additional information.*



## 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 building departments.

### Recommendations as follows:

1. Change the conversation from “Cost Effectiveness” to Value (Consumers do care about value)
2. Get Building Departments, Consumers and Contractors to value EE compliance / Facilitate the transformation of existing building department workforce to care (value) energy efficiency. (rec action #6)
3. Value EE compliance – to Building Departments / Market & training on the value and cost of non-compliance
4. Value EE compliance – for the Consumer / Frame the consumer energy efficiency conversation in terms of health and safety, and also in terms of legal compliance (must obey)
5. Use technology and training to move the market / Support the design and use of automated and wireless tools and technologies that facilitate and simplify the permit process (at the contractor level) and encourage tools that align with building department activities (rec action #4)
6. Engage private & public industry, education, and work force investment boards and local government (rec action #9)

▶ *Note: See 1.5.5 worksheet for additional information and “How To’s”.*



## 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 building departments.

### Quick Example Snapshot

- ▶ *Note: See 1.5.5 worksheet for additional information and “How To’s”.*



### 3.3.1 Priority sectors, systems, and workforce categories:

Using expert panels, set priorities for building segments most likely to scale up soon for efficiency adoption, and identify which building systems and trades need the most improvements Pay attention to existing IOU Needs Assessment and program logic models.

#### Recommendations as follows:

1. Accessibility: Increase geographical and socio-economical outreach to diverse population, working families, and small business etc.
2. Prioritize HVAC trade pipeline, market outreach and skill-building program development for incumbent workforce.
3. Increase HVAC priority building sector awareness for k-12, Postsecondary, Continuing Adult Education, Transitioning workforce etc. Identify existing IOU programs, efforts and utilize for market outreach and growth.
4. Seek to align CEC EBEE-AP WE&T Goals, IOU WE&T Business Plan Goals and PTLM Support to increase cost effectiveness, energy efficiency applications and measured performance.
5. Leverage and increase support for Private and Public Training Partnerships' efforts focused on "real-world" skillsets that create pathways for HVAC whole-systems approach, "High-Performance" and/or "Performance-Driven" Workforce Education and Training.

▶ *Note: See worksheet for additional information*



### 3.3.1 Priority sectors, systems, and workforce categories:

Using expert panels, set priorities for building segments most likely to scale up soon for efficiency adoption, and identify which building systems and trades need the most improvements Pay attention to existing IOU Needs Assessment and program logic models.

#### Quick Example Snapshot

- ▶ *Note: See worksheet for additional information*



## ◀ Risks / Attention Areas

**Risk:** Timely retrieval of Supporting WHPA Committee Chairs' review and input of EWG WP11 Sub-Strategy "Recommended Action Worksheets" may cause delays or impending progress

**Response:** WHPA Committee Chairs understand urgency for action

- ▶ Cross-Committee Chairs meeting to clarify collaborative efforts in process

**Risk:** Timeline and guidance on deliverables not clear and specific

**Response:** Request made to CEC EBEE for clarification





# Critical Path Deliverables and Estimated Timeline

Deliverable	Due Date (Estimated)
1. Finish Charrette Output WPII Pathways documents	Early to Mid August
2. WHPA EC review, guidance and approval of WPII Charrette outputs for release to CEC	Mid August
3. CEC EBEE-AP Staff timeline for Update Review of Action Plan so EWG WPII can be utilized in this discussion	Mid to Late August
4. Provide EBEE-EWG & Community WPII to WHPA Committee Chairs for review, input and their committee work	Mid to Late August
5. CEC EBEE-AP Staff provide follow-up to WHPA EBEE-AP EWG committee on applicable next steps of engagement	Late August



## EBEE–EWG Committee Resource Summary

- ▶ WHPA Staff time resources
  - 8 remaining Staff supported meetings in 2016 after today
  - Roadmap draft assistance available
- ▶ Concern = EWG committee members are facing negative time constraints for participation

What else would help?



## ◀ Wrap Up and Adjournment – WHPA Staff (5 min)

- ▶ Next Meetings (Pacific Daylight Time):
  - Invitation Only Cross-Committee Chairs Meeting
    - Wednesday, August 3, 2016 (12pm–1pm)
  - EWG Meeting
    - Thursday, August 4, 2016 (9am –10am)
  - EBEE “Community” Committee Meeting
    - Thursday, August 18, 2016 (9am –10am)
  
- ▶ Adjournment by 10:00am PDT



## For More Information, Contact ...

- ▶ WHPA EBEE Committee Co-Chairs
  - Barbara Hernesman (SynergyNexGen)
  - [Barbara@synergynexgen.com](mailto:Barbara@synergynexgen.com)
  - 530-277-4128 Cell and Text
  
  - Liz Yager (County of Sonoma – PACE)
  - [Liz.Yager@Sonoma-county.org](mailto:Liz.Yager@Sonoma-county.org)
  - 707-565-6167
  
- ▶ WHPA EBEE Committee Staff
  - Wendy Worrell
  - [wendy@performancealliance.org](mailto:wendy@performancealliance.org)
  - 951-244-6400 Direct Office
  - 949-246-4985 Cell and Text

