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Written Comments for Docket 12-EBP-1

Attn: Dockets Unit

California Energy Commission

From: Kevin Beck, VP Training & Operations

Building Performance Center, Inc.

RE: Comments on Draft Action Plan for Comprehensive Energy Programs for Existing Buildings



Dear Commissioner McAllister and Staff:

Thank you for the opportunity to provide comments on the Draft Action Plan to increase energy efficiency in existing buildings (and homes). The Action Plan is a great start and the workshops you've provided allowed us to see and hear even more depth surrounding the issues and potential solutions and strategies that will need to be created and or modified from existing programs to help us reach the goals we've set for ourselves.

As the Director of Training and Operations of a Training and Education Center for high-performance design and construction I, and the other founders of the Building Performance Center, are strong believers in the efforts of AB 758 and will do all we can to help California and the Nation reach its goals.

I would like to offer the following commentary on some of the proposed strategies spelled out in the Action Plan as well as point out some potential gaps or voids that may have been overlooked.

While I generally agree that the proposed three-pronged approach (no regrets strategies, voluntary pathways, and potential mandatory approaches) may yield some results I feel that these three stages have to be run in unison as opposed to one after the other to have the greatest impact and influence on the market. We, as a State, are about to demand a major "shift" in the construction industry inside California and we shouldn't take that objective lightly. I believe there needs to be a sense of urgency now, for creating policies that will forever change how buildings are retrofitted, remodeled, and built new otherwise, the shift may be too slow and future generations may ask, "why didn't they do more?". To curtail the damage that greenhouse gases have caused to our planet and to meet our energy efficiency goals we'll need to make some drastic changes in all aspects of the built environment, all at once, all with the same vigor.

I respectfully offer the following comments and feedback:

I support the **no regrets** strategies the commission has outlined and offer the following views;

Data Reporting- If we are to be successful in reaching our goals we will need to be able to measure that success. I agree that the reporting of energy efficiency gains after upgrade work has been completed is an essential feedback mechanism to the designers and installers doing the work. It is also a program-check by Californians who support these programs. They will want proof that these programs are effective and help benefit their communities. While everyone agrees on this essential step, we all tend to disagree on how it should be devised. I'd like to respectfully remind everyone that there is already a HERS Rater workforce out there who have weathered the storm with the rest of the industry. They are already trained to do this work. They already have established relationships with architects, builders, and contractors that utilize their services. They understand California's Energy Codes and know how to collect the appropriate data and conduct the proper diagnostic tests. In my opinion, it would be unwise to rule out the value of the HERS Rater community as the State designs these programs. It would not be cost effective to go forward any other way.

Permitting Support Tools- Having been a remodeling contractor I was all too aware of the additional costs the permit process and subsequent HERS testing added to my scope of work but, as a contractor who depended upon my reputation for the next project, it was essential to play by the rules. If we expect all contractors to play on an even playing field then we must make the permitting and testing process as painless to them and their clients as possible. If we made it easier for contractors to obtain the proper paperwork, "Would they follow all the rules?"- has long been a question. For most contractors time is money. They can typically justify to a client the cost of the permit itself but, when they have to add in the time spent at the counter obtaining that permit that becomes a more difficult discussion.

The commission is well aware of alterations to existing buildings that yield the highest cost savings potential. By making the permits and paperwork extremely accessible and seamless for these alterations we may see a drastic increase in efficiency gains, especially in the residential HVAC change-out market. In my opinion, there shouldn't be a gas-fired furnace, AC unit, or 10' length of duct sold in California without a permit attached to it and a HERS Rater assigned to verify the installation, period.

Educational Resources- I strongly agree that education will play a major role as we strive to reach our goals. However, I also recognize that simply educating everyone on the virtues of something may, by itself, not be enough to motivate someone to act. We, as Americans, are pretty well educated when it comes to healthy lifestyles and good nutrition yet we have one of the highest obesity rates on the planet. Does the educating we do make a significant difference? We fought this education battle within the EUC program and we still haven't been able to sell 'energy efficiency' to the masses. I would also like to point out that there are huge deficiencies in my outreach efforts when it comes to different segments of our population. While it is true that some efforts were made in the EUC program to reach out to different cultures we failed to talk to those cultures as the workforce we are so dependent upon.

I have been teaching Green Building, High-Performance Construction, Building Science, and HERS rating for the past ten years and I have yet to see any effort at re-training the Latino community, or the Asian community, or any other minority here in California. When I have taught HERS I had to remind potential students that very little code is translated into any other language. How are we to include all residents of California to join us in this fight if we are not talking to and educating all of them as well?

I encourage the development of collateral materials for all segments of the built environment that support the need for increased energy efficiency and that describes the steps on how to actually do the work. These materials must be well understood by every person in the construction workforce no matter which language they speak. It's in all our best interest to do so.

Workforce Training & Development- In all my thirty years as a general contractor I never met one person who went to school to learn their trade other than architects or engineers. We were all taught in the field by our mentors and co-workers. I am proud of the work I did but, in retrospect, question whether or not it could have been better. We are about to ask builders to go beyond “plumb, level, and square” as they remodel and erect new buildings. We are going to demand that they build higher-performing structures than they had in the past. How are they going to know how to do that? They only have the tools they have. They only have the knowledge that was passed on to them from someone else. They need to be shown new tools and methods that they have never been exposed to. They need to see and understand how they can measure performance of buildings so that they can be a part of the solutions.

The biggest push back I get from builders when I ask them why they don't get more training is they have no time and their clients aren't asking for it. Sure, they would like to stay ahead of their competition by being more knowledgeable about energy efficiency and green building but, will that make them any more money in a given year. Possibly, possibly not.

In my opinion, the only way we'll be able to get mainstream contractors to join us in these efforts is to do a little pushing (code) and a little pulling (incentives, increase demand). One of these strategies alone will not work. We will need both happening at once.

As for the training and education itself, there needs to be serious consideration as to who should be allowed to train others and what criteria will we be holding them to? CalCERTS, one of our strategic partners, is a California HERS Provider. They took it upon themselves to attain accreditation from ANSI-IREC as a Clean Energy Workforce Training Provider. No one asked them to. They just knew that to be taken seriously in a jungle full of fly by night training entities that they needed structure and oversight beyond even what California asked of them as a HERS Provider. Their organization is evaluated by ANSI-IREC annually from top to bottom including business structure, curriculum development and vetting, trainer credentials, student monitoring and mentoring, and facility/learning environment. All of this is in an effort to ensure that each student is being taught the most effective way possible utilizing current adult education techniques, delivered by the most skilled and professional instructors, within a conducive environment.

I am not suggesting that all training entities become ANSI-IREC accredited but, I do propose to the commission that they take a good hard look at what has been delivered in the past and how we can take those lessons and accelerate the process without losing effectiveness. Because, at the

At the end of the day, if that worker cannot go back to that job site and perform their job better than they did before what good did we do? I have seen hundreds of BPI certified individuals who went through revolving-door-training back in the ARRA days and very few of those folks knows how to proceed. They were not given enough breadth of knowledge to be able to turn this new-found education into a service to provide to their clients.

At the Building Performance Center we educate potential students on the front end by showing them our educational pyramids. The purpose is to show prospective students that they will need more than just technical training and educating to start a new career as a HERS Rater or Energy Auditor. We show them the ladder-like tiers that they should accomplish if they want to be successful. The bottom rung of the ladder starts with personal effectiveness that every good worker should possess such as; interpersonal skills and professionalism. The next tier is all about basic academic competencies such as math, reading, and writing. Next comes specialized workplace competencies such as client relations, team work, and problem solving. Then we focus on industry-wide competencies like building science, quality control, and safety awareness. Next are industry-specific topics such as HVAC, insulation, and construction basics. Finally, the training focuses of a specific job function such as field verification and diagnostic testing for HERS Raters. Although our training is aimed at the higher tiers of the pyramid, when students understand what is necessary to become successful they're appreciative that we've helped them on their journey.

I'd like to offer the following comments concerning **Voluntary Pathways**;

In general I don't believe the Voluntary Pathway will be very successful in helping achieve our goals. It is appropriate to believe in the good within people to do the right thing but, in the end, it comes down to food on the table for some. Having taught many builders and contractors to build green, I know how limited my reach was. I had a hard time filling the room with folks who believed in these goals and who wanted to make a difference. The problem is that, even though hundreds hold a green building credential today, very few of them incorporate everything they had learned on every project they build. They simply cannot do that and still stay viable in a highly-competitive, post-recession market.

As mentioned earlier, there will need to be pushing and pulling to get the market primed to execute. A few may do so voluntarily but, as I have seen with certifying green builders, this will be a low number unless the other program strategies happen simultaneously. They will jump into these programs willingly once consumers demand it.

Promoting Various Pathways- This topic is a double-edged sword. True Building Performance believers would say these mini steps will only confuse the consumer and the building community and probably not deliver the energy savings predicted. A building cannot be converted to a high-performance structure unless all inter-related systems are tackled at the same time. If we keep allowing single measures to be incentivized what message are we sending? While I understand that not every building or home has the potential or budget to reach deep energy savings perhaps addressing the worst violators and climate zones with major upgrades is better for the state than just 10% shaved off everyone's utility bill?

Expanding Outreach- I feel it is essential to bring the contracting community to the table when it comes to designing solutions. If they can't come to meetings and workshops perhaps we need to go to them.

We should be conducting meetings and workshops at their jobsites, in their territories so that they feel respected and valued. We cannot ask them to stop production after such a painful recession but, we

cannot let them continue the bad practices of yesterday, either. Commission needs to find funding solutions for such efforts so that the workforce doesn't need to slow down. Let's talk to them on their turf using their own projects as learning tools.

Standardized Tools- Imagine if builders were permitted to build using either the empirical measurement scale (feet and inches) or the metric scale (centimeters and meters)? Just think how difficult it would be for the framer, the electrician, or the plumber who serves two different contractors using two different measuring sticks? Fortunately, we don't have that problem during construction. There is a standard measurement we use and every trade is responsible for their work to make sure it aligns with and doesn't violate code. But that's where it stops. The post-build activities are not "standardized". Energy modeling, HERS and building science training, energy uploads and data storage are all over the map. Without a cohesive "language" it's no wonder no one wants to embrace these programs. This is a major problem on a national scale as well. California, right or wrong, is not in-step with how energy is assessed and reported in the rest of the country. Again, this does not help the workforce who must keep clear which state they're standing in and which code to follow. We should strive for a universal system where it doesn't matter where the structure is, it will be evaluated as needed for us to learn from and refine techniques along the way.

Focus Attention on Small & Medium Commercial Buildings- I believe there will be little voluntary improvements to small and medium sized commercial buildings unless there are significant reasons to do so (rebates & incentives, reduced property taxes, higher rents, lower turnover, etc.). Why else would a building owner choose to do it? What's their motivation? They don't live there. Their families don't live there. There's no need to decrease energy use if the tenant is paying the utility bill. It's not logical to assume they'll do this simply for the greater good.

If Commission wants these buildings to be retrofitted to reduce energy and or increase renewables in a given community then the other aspects of the program need to also be implemented. For example, if a commercial real estate appraiser understood the higher value that an energy efficient building represents versus buildings that are less energy efficient, then that building owner should be able to borrow/fund the retrofit project more easily. As it stands, there is a huge disconnect between price and value. We must re-educate the financial entities as well as the builders, and building owners.

Rental Property and Disadvantaged Communities- These are delicate issues with multiple layers. When we design programs to help us reach our goals we must remain cognizant of all the stakeholders. In the rental market we have non-owner occupants benefiting from energy improvements and better indoor air quality and building owners who may or may not see increased value recognition after improvements. What benefit does a current building owner receive, if any? If the appraisal market doesn't value these improvements appropriately his investment doesn't appreciate, and if the tenant is paying the utility bill, there's no savings in operating expenses. We need to encourage building owners to participate. Hopefully, when all the other sectors are simultaneously addressed, it will help property owners increase the values of their investments, and stimulate renters to seek out "healthier" "more energy efficient" rentals.

For disadvantaged communities we need to be even more compassionate and be willing to ensure their health and safety as we address their living spaces. It is my opinion that existing WAP programs should

be expanded and better recognized for the work they continue to do. They provide a much needed service and could do more with some additional training and skill development. There are already excellent

training programs for weatherization folks and these could be expanded and targeted to serve the disadvantaged in an effort to reduce/conserves energy.

Working with Local Governments- We're all in this together. The messaging from all branches of government should be clear, concise and cohesive. It is essential that not only the building sector understand the goals and objectives, but that Counties, Cities, and Towns within California also understand it. They all need the same "script" so we're all on the same page. When a new code or policy is enacted each local government should understand the direction and then support the new policies for the good of the state/nation. I encourage Commission to create, and or have created, uniform collateral pieces to use to educate the public and government employees. There are a lot of people who still have no idea what AB758 is or what the goals are. It will be easier to transform the general population once they all know the goals.

Property Valuation- I believe this is a critical step in the pursuit of our goals. This will be one of the few ways to convert a home seller to an energy efficient home seller. Currently, there is little monetary reason to incentivize a homeowner to spend \$20-50,000 to do a deep energy retrofit on their home. The only way I, as a Home Performance Contractor, ever sold work was based on my reputation to improve indoor comfort and air quality. I never once sold a job because they wanted to reduce their energy bill. In order to influence Joe Homeowner we need to appeal to his/her pocketbook. They are investors just as the commercial building owners are. They, too, want to see their investment appreciate. How do we help them while they help all of us? When appraisers and financial institutions finally start to legitimately value energy efficient/green buildings and homes we'll start seeing more and more participation. Properties must be valued for their current market status as well as their long term operating expenses.

Innovative Financing- Even if everyone tomorrow decided to make improvements to their properties, money, and access to it, will still be an issue. Developing this Program in the shadow of one of the worst recessions to hit our country in decades makes it all the more challenging. Just when we need access to funds to help support programs such as these, banks decide to tighten up. We'll need partnerships developed and maintained with financial institutions that understand these goals and are willing to help us get there. We need easy access to funding in multiple categories.

Contractors should be funded to eliminate the "learning curve". Someone has to carry that cost. If it's the State's goals shouldn't they help fund the re-training of the workforce? If you tell the average contractor that they're going to be re-trained for free to help remodel and build energy efficient buildings for the next generation they'll jump on board. If you provide access to capital to acquire specialized equipment and supplies, they'll buy it. If you deliver a one-page loan document to a potential customer who is considering an energy upgrade, chances are they'll buy it. I know the reverse is true. I know that even after hours of diagnostic testing, energy modeling, and photo collection that homeowners probably won't do much because of inability to get funding these days. It is crucial that this lack of capital access be resolved.

Finally, we'd like to offer the following comments concerning the **Mandatory Approaches**;

As stated previously, I feel that the three prongs must be delivered simultaneously for greatest results. To wait may benefit a few short-term but, at what cost long term? Science has already confirmed that we are dangerously close to irreparable harm to the planet caused by our failure to control emissions. What

benefit to future societies is it that we watch the fuse burn a little more? I have talked with folks from all over the world and they're always looking to see what California is going to do next as far as energy

policy. Let's be proud of that recognition and take a stance. Sure, there will be some upset people short term but the long term legacy is most important.

Commercial & Public Building Disclosures- I feel this program should run simultaneously with the above programs. As stated, the message becomes more audible when delivered through multiple speakers. We should be trying to influence all segments of the market to participate whether it be commercial investors looking for the most efficient/healthy building or homeowners who want a higher premium because they just had upgrade work done.

Energy Performance Disclosure- The Commission has identified the most appropriate "triggers" to collect this data and make it publicly available. I support this measure and would hope it becomes a reality sooner rather than later. It's already common to see how things "perform" before we buy them such as calories in a drink, or MPG of the car, or the number of Gold Stars next to a hotel room. Why is it we're so afraid to "label" our homes and buildings? Isn't this in the best interest for all? Don't we all want to know what we're getting into when we're about to make the biggest investment of our lives? This, in my opinion, is no less important than the termite report or the title search on a property. All consumers should have access to this information and that information should be tracked and updated at future "trigger" points.

Respectfully Submitted: July 11, 2013

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