

## Contractors' Desired Outcomes

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At the request of the CEC, we submit here the list of topics we believe that, if addressed and implemented, would assure a successful market transformation with respect to AB-32, AB-758 and the Energy Upgrade California initiative. We are focusing here on describing the critical issues and clarifying desired outcomes, not necessarily solutions. Deriving solutions is the purpose of our ongoing dialogue.

### Contractors' Desired Outcomes:

**Successfully upgrade all residential and light commercial buildings for energy efficiency in order to help the State reach its climate goals of: reaching 1990 levels of GHG by 2020 and achieving 33% electricity from renewable sources.**

To affect this outcome, we are working to:

1. Increase the quality, economic value, number, and speed of energy efficiency upgrades in buildings,
2. Achieve an average of 40 percent energy savings in the State's entire housing stock by 2020 and an 80 percent savings by 2050 (reducing GHG and increasing impact of renewables),
3. Stimulate the State's economy by creating thousands of jobs at the local level,
4. Transform the Construction Industry to become experts in whole-building energy efficiency, increase public awareness of energy upgrade benefits, and build a long-term industry,
5. Play a lead role in the emerging consumer-friendly market transformation known as Energy Upgrade California™ by maintaining effective partnerships with other market stakeholders such as local governments, investor-owned- (IOU) and public-owned-utilities, and allied clean energy industries such as efficiency technology manufacturing/distribution, renewable energy generation, water conservation, and sustainable materials.

### Contractors' View of Present Situation

To achieve these outcomes, **we feel that major changes must be made** to the State, IOU, and local government incentive programs that comprise Energy Upgrade California (Energy Upgrade). Factors such as the impact of the economic recession on homeowner purchase decisions,<sup>1</sup> homeowner perception that energy upgrades are costly, the lack of homeowner awareness of the multiple and long-term benefits of energy efficiency upgrades, the lack of affordable financing options, and excessive contractor overhead and administrative costs imposed by prohibitive Energy Upgrade program requirements have resulted in the following:

1. Market penetration, energy saving levels, and rates of energy upgrades executed are far below the early market penetration trajectory needed to meet the state-specified carbon reduction goal by 2020.
2. Given the disparity between achievements and trends to date versus the strategic State goal, it is imperative that some of the outcomes listed below be radical improvements rather than incremental and that a sense of urgency on most topics will be necessary.

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<sup>1</sup> See *Delivering Energy Efficiency to Middle Income Single Family Households*, Lawrence Berkeley National Laboratory, 2011, <http://middleincome.lbl.gov/>

## 1. Policy Environment — Desired Outcomes:

- 1.1 There is an **urgent need for higher-level regulatory and utility management support for program flexibility and speed**. Too often it seems that the implementation of important climate goals mandated by AB32 and now AB758 are relegated to lower level program managers who do not have adequate authority to take the most efficient path to achieve timely program success.
  - 1.11 **Contractor participation at higher levels of discussion and authority** would more quickly illuminate implementation barriers as well as provide practical suggestions for flexibility and speed improvements to the process. We would advocate the recruitment of the top Energy Upgrade contractors (chosen for business acumen and/or whole-systems expertise in producing 40 percent or more energy reductions) across the state to participate in program design.
- 1.2 **We support the purpose of a Home Energy Rating System** as stated in AB 758 - given the three following caveats:
  - 1.21 **Keep the home energy “rating” process separate from the energy upgrade sales and retrofit process** or create program flexibility that will allow contractors to conduct their sales and retrofit process without the “program friction” (that is, complications to project implementation caused by program processes) of accommodating a parallel and simultaneous rating process that delays project implementation, requires additional home visits, and causes consumer confusion regarding the function of a rating versus a contractor test-in/project scope inspection. The rating process should be separate and optional for Energy Upgrade customers.
  - 1.22 **Create a rating method that is supported by building scientists and contractors** – not just regulators and program managers. As currently conceived, the California Whole-House Home Energy Rating (i.e., HERS Whole House Rating) is seen *as inaccurate, confusing, too costly, and potentially damaging to market confidence* once the inaccuracy of system’s energy savings estimates are demonstrated in the marketplace. As currently conceived, the HERS Whole House Rating program is not supported by the states’ leading building scientists and the majority of leading-edge home performance contractors, and its required use in the California Public Utility Commission (CPUC) building efficiency program has been deferred. This lack of support by industry experts is a huge program design schism that will drag down program implementation statewide.
  - 1.23 **Create both an operational analysis and an asset rating system (or a combination)** to serve both contractor project planning and State energy evaluation needs. Building performance contractors are concerned that confidence in performance outcomes are and will continue to be eroded by inaccurate asset modeling and a lack of post-upgrade performance data based on actual energy usage. Innovation (both in upgrading buildings and manufacturing equipment) and market financing tools are dependent on reliable and predictable performance outcomes.

## 2. Program Design and Implementation — Desired Outcomes:

If program inefficiencies are resolved, current Energy Upgrade Participating Contractors will complete significantly more energy upgrade projects, which in turn will attract more contractors to enter the program and jobs will be done faster and more economically. Also, it is imperative to embrace the Participating Contractors as principal allies, not potential liabilities to be guarded against.

- 2.1 **Zero “program friction” with a continual increase quality, safety, performance metrics, and proper data collection** for contractors and their customers during the sale and implementation of Energy Upgrade projects. Different IOU programs throughout the state have differing levels of “program friction” that complicates the process of project approval, information transfer, and incentive

delivery that slow down the sale and/or execution of Energy Upgrade projects. **We must work toward the elimination of any mandated step or process that adds *time or cost* to the homeowner and contractor interaction**, which is already a complex process involving marketing, selling, and executing energy upgrades. **A universal sense of urgency, program innovation, and flexibility must be incentivized at all levels** — *while continually improving quality, safety, performance metrics, and data collection needs*. Contractors currently feel left out of the program design and improvement process. Many Contractors are not entering this field because of program confusion and complications — others are dropping out and/or doing work outside the program.

- 2.11 Contractors must be an ongoing, integral part of strategic program design** — not brought in after the design process to vet incremental program design elements.
- 2.12 Pre-project job approvals should be immediate** — with streamlined quality assurance/quality control (QA/QC) protocols implemented post-project.
- 2.13 Program managers and IOU sub-contractor/consultants must be incented for timely processing of projects** to prevent departmental sub-optimization and minimize “*silos effects*.”
- 2.14 Separate home energy ratings** from IOU Energy Upgrade program operations to reduce market confusion, program overhead cost (for both program managers and contractors) and “*program friction*”.
- 2.15 Eliminate the duplication of test in and test out** by contractor and IOU QA staff on all jobs — we recommend a phased process for new Participating Contractors starting with 10 percent, then 5 percent, and finally none with zero program friction to process.
- 2.16 Create a more efficient QA/QC system** that is **outside of the sales and construction process**. (see section 7: Quality Assurance)

**2.2 Simplify rebate strategy and rebate process to achieve zero “program friction”.** It is time to revisit all of our early assumptions around modeling, measuring and administering rebates. It should be understood that the modeling currently required by the program is not used by the contractors to plan or execute their work – it is solely used to determine rebate amounts. The modeling process for contractors and program managers as currently implemented is hugely expensive and creates tremendous “program friction” for all participants.

- 2.21 Tie rebates to performance outcomes.** Homeowners, contractors and IOU and local government programs must ultimately be tied to energy reduction results based on actual energy bills (“normalized” if necessary for anomalous weather and/or other considerations). We propose enacting immediate pilot studies and data collection around various solutions to this issue with the goal of moving to operationally derived (that is, actual performance result based) and simplified incentives/rebates by 2015.
- 2.22 Replace simulation modeling with a less expensive, simpler, method** for determining rebates. This would save millions of dollars in program and contractor overhead and if rebate amount were tied to actual bills homeowners would understand the process and become participants in the process of saving energy.
- 2.23 Aligning contractor and customer outcomes by tying work to performance outcomes:** By using a simplified, more accurate and less costly rebate process that is tied to actual energy bills, contractors would likely be incented to guarantee savings and rebate amounts within an acceptable range because they would very quickly learn what combination of measures are most effective in actual energy reduction.

**2.3 Contractor Incentives, Support and Compensation.**

- 2.31 If modeling is not eliminated from the rebate process, we suggest that Contractors be compensated for the tremendous cost (currently not accounted for)** of the administrative time spent in processing program paperwork by paying participating contractors a fixed amount per job after test-out.

- 2.32 Incentivize contractor behavior for both quantity and quality of upgrades by creating tiered incentives that culminate in an *Ultimate Contractor* designation** for those contractors who are committed to (or aspire to) whole-building deep energy retrofitting expertise. Many business models for executing various retrofit measures are developing — an Ultimate Contractor path would be the highest model for the entire industry and provide an industry vision and a research platform for deep retrofit protocols (those exceeding 40 percent) in contrast to partial measure execution models. (A tiered incentive of \$X for 20 percent – 39 percent energy reductions, \$2X for 40 percent – 59 percent energy reductions and \$4X for 60+ percent energy reductions would incentivize for both number and quality of retrofits).

### **3. Workforce Development — Desired Outcomes:**

The success of the entire building efficiency program depends on qualified contractors executing high-quality jobs profitably and rapidly. Currently, we have many technically trained contractors but simply do not have enough advanced training in all topics including competence in business, marketing, quality, and installation expertise.

- 3.1** Fund more widespread and more broadly defined **technical training and mentoring at installation level** - do not emphasize auditing/rating as sole training requirements.
- 3.2** Also fund **marketing, sales, and business management training** for home performance companies.
- 3.3** Deliver sufficient **pre-qualified, credible, new-hire candidates** to upgrade contractors through workforce development programs, community colleges, and trade tech systems. Finding qualified new-hires for field crews is currently a huge bottleneck.
- 3.4** **Commit to BPI Certification** and Standards as the foundation of the workforce.
- 3.5** **Avoid "retooling"** (changing certifications) the workforce with each new program cycle
- 3.6** Offer incentives and/or **financing for necessary contractor investments** in equipment.
- 3.7** Participate actively in **national efforts to improve standards** and certifications which will create consistent training and certainty for Contractor investment.

### **4. Public Education and Marketing — Desired Outcomes:**

The vast majority of the public has not yet heard of Energy Upgrade California or that buildings are the largest contributors to global warming in the U.S. and that there is a solution (whole-house upgrade) that also provides multiple other economic and life-enhancing benefits.

- 4.1 Urgency, visibility, and validity about the power and benefits of energy efficiency:**
  - 4.11** **Convey a sense of urgency** to the public about of the size and scope of our energy supply/cost and greenhouse gas emissions problems and the incredible power of building efficiency to provide a solution.
  - 4.12** Marketing programs need to leverage **on-going and frequent validation from the most visible politicians and state leaders** — IOUs, CPUC, CEC, Governor, Senators, Mayors, Supervisors, movie stars, and other high-profile and respected leaders.
- 4.13** **Incent marketing/education program implementers** based on contractor lead-to-sales-to production performance (both quantity and speed of throughput) like any professional marketing program that needs to prove return-on-investment.
- 4.14** Whole-house upgrades should be marketed to building owners as **the “ultimate step” among the many simpler and more economical stepwise options** by all IOU and local government programs and contractors. Combine whole-building upgrade marketing with all other efficiency opportunities, including behavior change, in all state, county, and IOU energy efficiency education efforts.
- 4.15** **Institute “hyper-local” marketing/education programs** that coordinate city hall and community organizations with specific contractors for both wide and deep penetration within individual cities and then co-fund the cities’ marketing efforts.

- 4.16 Use flexible and substantial **coop marketing to optimize contractor marketing costs**.
- 4.17 **Leverage federal programs** for messaging and marketing content (such as Better Buildings or Home Performance with ENERGY STAR) that will have broad market recognition.

## **5. Consumer Financing — Desired Outcomes:**

Affordable financing is a key tool for building owner participation in the current economy. Studies show that consumers respond to financing programs that offer 5 percent or lower interest rate. Providing a variety of affordable financing tools equips contractors to provide solutions for a range of financing needs in the marketplace. To provide affordable financing, we recommend the following:

- 5.1 Engage private investment capital with strategies similar to present solar leasing.
- 5.2 Support on-bill financing or repayment options with either utility or third-party lenders.
- 5.3 Implement loan-loss reserves to stimulate interest rate reduction by lenders.
- 5.4 Stimulate locally-funded Property Assessed Clean Energy (PACE) concept options.
- 5.5 Encourage the use of Energy Efficiency Mortgage and engage local mortgage broker and realtor partners trained in EEM implementation.

## **6. Administration and Reporting — Desired Outcomes:**

- 6.1 Conduct ongoing assessment of aggregated savings versus incentives paid.
- 6.2 Use random sampling to confirm energy savings on an aggregate basis, not every home.
- 6.3 Compare/refine predicted versus actual achieved savings per normalized utility bill data.
- 6.4 Support development of and adopt national standards for: data collection, calibration, and data transfer protocols.

## **7. Quality Assurance and Control — Desired Outcomes:**

We believe that QA/QC is essential for public good, quality assurance, and contractor monitoring/education. The QA/QC process must also be efficient and practical for all parties.

- 7.1 Assure contractors/raters are fully informed of proper practices; enforce on a regular basis.
- 7.2 Assure contractor capability through training, certification, mentoring, and quality verification (but keep it out of homeowner/contractor sales and construction process).
- 7.3 Emphasize safety training, verification, and sanctions, especially in combustion safety.
- 7.4 Use field job verification as mentoring (keeping it out of the sales/construction process), and include clear sanctions against repeat violators.
- 7.5 Provide expert advice to contractors via online references plus field support on request.
- 7.6 Create robust feedback mechanism for homeowner satisfaction or complaint with rapid follow-up procedures.
- 7.7 Need clear system of reporting unethical or unprofessional Contractor behavior recommend as per BPI delisting process.
- 7.8 Ensure protocols (e.g., BPI's Accreditation model) that minimize program expense and provide adequate oversight of the end product.
  - 7.81 QC inspectors should be qualified to at least the same level as the contractors.
  - 7.82 QC inspectors should be third-party (non-implementer staff) certified quality control inspectors preferably in BPI's Quality Assurance network.
  - 7.83 QC costs should be fixed and predictable if passed through to the contractors (or else exclusively paid by the program).
  - 7.84 QC protocols should follow the performance standards adopted for the participant certification for the entire program (BPI Standards for retrofit programs).

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