

**BEFORE THE CALIFORNIA ENERGY COMMISSION**

California Energy Commission

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In the matter of:  
Comprehensive Energy Efficiency Program  
for Existing Buildings (AB 758 Program)

Docket No. 12-EBP-1

**COMMENTS OF  
LOS ANGELES COUNTY  
ON  
DRAFT ACTION PLAN FOR THE COMPREHENSIVE ENERGY EFFICIENCY  
PROGRAM FOR EXISTING BUILDINGS**

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## **I. Introduction**

Los Angeles County appreciates this opportunity to provide comments on the California Energy Commission's ("CEC") *Draft Action Plan for the Comprehensive Energy Efficiency Program for Existing Buildings* (the *Draft Action Plan*), developed as part of the CEC's implementation of Assembly Bill 758 (2009).

Based on direct professional experience from former San Francisco energy staff, and after confirming with current energy staff, we wish to correct several statements about San Francisco's energy efficiency retrofit program for public buildings. This program, piloted under ARRA funding by the SF Public Utilities Commission, was held up as a successful model for public agencies in the CEC Draft 758 Action Plan. We are confident that the improved understanding of the San Francisco program, from those more familiar with it, will help allay the concerns of those commenting about public benefits of JOC-based retrofit programs. We begin with a comprehensive overview of Job Order Contracting (JOC) and the San Francisco efficiency upgrade program to educate any concerned parties as to the significant potential benefits from the project approach already utilized by San Francisco and that will soon be underway in Southern California as a part of The Energy Network, known formally as SoCalREN, project led by Los Angeles County. We then address public comments submitted by IBEW, Emerald Cities, and others.

## **II. Background on Job Order Contracting and the SEPUC Program**

A Job Order Contract (JOC) is a competitively bid, firm, fixed-price, indefinite quantity contract for as-needed construction services. With Job Order Contracting, a contractor's bid is their proposed mark-up applied to the pre-set unit prices found in an exhaustive catalog of detailed construction tasks (referred to as a "Construction Task Catalog" or CTC). The contractors that meet the minimum qualifications and bid the lowest mark-ups are awarded contracts. The CTC includes specifications for each task and is priced locally, including local material, labor and equipment rates. As projects are identified, task orders are issued against the master contract. Each task order consists of a scope of work, which the contractor translates into a detailed list of repair and construction tasks, all of which have specifications and established unit prices. By comparison, the conventional procurement process for public sector construction projects is to solicit a competitive bid for each project, based on an already completed design. This "design-bid-construct" process, driven in part by competitive low-bidding laws, is appropriate for larger, more complex projects (primarily new construction), where extensive design is needed and project delivery timelines are much longer. But, for energy efficiency projects that are relatively straightforward "repair or replace" projects, preparing detailed bid packages, completing 100% design, conducting extensive advertising and receiving, reviewing, and evaluating bids is a very time and financial resource intensive process.

Many variations to Job Order Contracting exist as do misconceptions about the applicability to

energy efficiency contracting. JOC has a history of effective implementation in the US. The first JOC contracting system was developed at NATO in the 1980's as an alternative contracting method for repair, renovation and maintenance type projects. Since then, billions of dollars of JOC projects have been completed within the United States Army, Air Force, Navy and the United States Postal Service.

The SFPUC building retrofit program is the “first-in-the-nation” JOC based program that utilizes catalogs adapted specifically for whole building lighting and HVAC energy efficiency retrofits, while contracting directly with energy efficiency (EE)-specialist lighting and mechanical trade contractors.<sup>1</sup> The San Francisco municipal building retrofit program has successfully completed over \$15 million in energy retrofit projects in more than 100 municipal buildings since 2009. Projects have been completed in a wide range of public facilities that demonstrate the program model's broad applicability across various building types and energy efficiency measures (EEMs). Projects tend toward deep retrofits comprised of a comprehensive package of EEMs that combine short-payback and long-payback EEMs on a facility or multi-facility basis to maximize energy savings. Using JOCs has made a dramatic difference in the quality, speed and value of EE projects delivered by the program for municipal departments. It is the intent of the Southern California Energy Network program to build on the success in San Francisco through the design and launch of a regional program that will include many additional enhancements for technical, logistical and project management support to public agencies that will greatly expand and accelerate the implementation of energy efficiency upgrade projects in their facilities.

Key advantages that come from utilizing JOCs for EE retrofit programs and projects, compared to design-bid-build, include:

- 1) *Administrative efficiency*: master contracts are awarded to multiple contractors through one simple, fast, competitively bid RFP process; contractors are then available on call to multiple customers to deliver flexible, comprehensive retrofit services. As projects are identified and assigned to contractors over time, each contractor completes multiple smaller jobs that roll up to the overall value of their contract.
- 2) *Quality contractors and quality assurance*: Contractors must meet minimal qualifications; also each task in the CTC comes with technical standards that can be customized. Contractors are guaranteed only a minimum amount of work and thus have an incentive to perform high quality work in order to continue receiving projects.
- 3) *Complete transparency*: Construction costs are broken down into a detailed list of tasks with CTC unit prices and quantities. Online software programs/services are available to streamline the development of cost proposals by contractors and review by engineers and project managers.
- 4) *Cost savings and greater cost certainty*: The CTC is used to develop early cost estimates

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<sup>1</sup> The City of San Francisco JOC based EE program is described in more detail within two papers published as part of the 2010 and 2012 American Council for Energy Efficient Economy Summer Study on Energy Efficiency in Buildings, and listed in the references section.

using pricing to which the contractor is held; and there is less risk of inflated costs for change orders since added work is priced from the catalog. The JOC process ensures that any change orders are fairly priced, thereby providing greater cost certainty and control. Cost savings compared to traditional contracting methods include lower procurement and project management costs, and lower design costs associated with completing performance specifications versus full design drawings.

5) *Speedy project delivery*: Detailed design is replaced with performance-based technical specifications that build off of the completed audit report. The streamlined design takes a few weeks versus months for full construction drawings (CDs); once the performance specifications are complete construction can begin within weeks through a streamlined task order process. Full CDs are completed by the JOC contractor when required. The project schedule for design through- construction award was reduced to as little as six weeks compared to 10-15 months using conventional procurement strategies at the City of San Francisco.

6) *Greater collaboration and integrated design approach*: Contractors are on contract to engage early in audit-design stages to solicit their input on the constructability and relative costs of various EEMs. This enables team members to collaborate throughout the entire project while utilizing an integrated design approach to optimize the whole building retrofit and to mine every available energy reduction.

This contracting method is ideally suited for energy efficiency retrofits and provides many advantages over design-bid-build (typically used in the public sector) that tend to set up designers and contractors to be at odds with each other. Unfortunately, design-bid-build (unless very skillfully managed) can become a recipe for low quality construction at the highest price when one accounts for the cost of change orders necessary to complete the project.

### **III. Response to Specific Comments**

Comments by IBEW, Emerald Cities, and sometimes identical comments by others, noted “demonstrated problems” that JOC has created at public agencies, and urged the CEC to “present the potential risks and challenges associated with JOC” and that energy retrofit program models using JOCs not be held up as a successful model for public sector energy retrofits.

In an effort to educate concerned parties about the San Francisco Retrofit Model cited in the CEC Action Plan, areas of concern noted in the public comments are outlined below, followed by a response to correct misstatements, mischaracterizations or inaccuracies:

1. Potential to significantly increase project costs;
2. Reduced ability for public contracts to achieve public benefits;
3. Reduced ability of public agencies to execute labor and contract compliance.
4. Bonding requirements that exclude many contractors.
5. Reduced workforce development opportunities.
6. Low bids from contractors may put project quality at risk.
7. JOC bid process can be confusing.

8. Larger projects may be broken up into smaller projects.

1) Potential to increase project costs:

Comment: JOC has the potential to increase project costs. If the information regarding total scope, size, timeline, and number of projects is not clear to a contractor before he/she places a bid, then the contractor may over-estimate the cost of materials, administrative and field personnel, equipment costs, etc. needed to complete the JOCs.

Response: JOC contracts result in a detailed itemized list of projects costs making it easy to correct over estimates or inaccuracies in the contractor's cost proposals when reviewed. San Francisco's experience has been that overall project costs are lower with the JOC-based retrofit model, compared to traditional public sector bidding. For the ARRA-funded program referred to in the CEC Report, the retrofit projects were originally expected to be implemented using the City's traditional public works design-bid-construct method. Using this method, the ARRA funds would have covered HVAC-only scopes in only four of the ten targeted ARRA facilities, while skipping over nine lighting retrofits, and leaving six of the ten facilities with no upgrades at all. By instead delivering the projects based on the San Francisco Retrofit Program model, all ten sites received retrofits, and savings and climate benefits were increased significantly.

Considering the overall project delivery cost, including significant transaction costs of repeated bidding of small retrofit projects, is very important; higher costs for delivering the same project means a given funding level produces less energy savings.

Several other studies and articles point to significant cost savings with Job Order Contracts.

- Paul Scott, the Chief of Architectural Services for Sacramento County, in April of 2010 wrote in an American Public Works Association Reporter article that, "With the JOC program we have experienced considerable time and cost savings over the traditional procurement system."
- In a November 1999 study of the Los Angeles Unified School District Job Order Contracting program, the independent construction consulting firm, GAFCON wrote, "Our analysis revealed lowered total project delivery costs of 5-10%," and "Jobs bid by contractors under the JOC system appear to be 5% lower on average when compared to traditional bid system." An earlier study by the independent consulting firm FMI reported, "FMI calculated a \$397,717, or 9.2% savings on these 59 Job Orders." The 59 Job Orders were all of the completed jobs at the time of the study.
- Every study on JOC shows that the project costs are lowered, not increased.

Comment: JOC may make it harder for contractors to plan ahead and to buy materials in bulk, even though buying in bulk often helps to reduce costs.

Response: JOC can increase the ability to buy in bulk to get better prices that are passed on in the catalog pricing through volume discounts with price modifiers that can be selected as part of the cost proposal.

2) Reduced ability for public contracts to achieve public benefits.

Comment: JOCs reduce the ability for public contracts to achieve public benefits such as small business utilization, local hire and apprenticeship. JOCs can significantly reduce the abilities for small and medium-sized contractors to compete.

Response:

- San Francisco's JOC contracts include the same Local Business Enterprise (LBE) subcontracting goals, and the same Local Hire provisions as non-JOC contracts;
- The ARRA-funded program cited in the CEC Action Plan was prohibited by the terms of the federal grant from including local business or local hire provisions in the specific JOC contracts used for the program, so local employment outcomes for that program would not be representative of the San Francisco retrofit model in general.
- Apprenticeship utilization in retrofit projects, by our observation, is challenging due to the small scale nature of individual retrofit projects, rather than the contracting method. As important, perhaps, are the restrictive admission policies to apprenticeship programs of the high skill unions that implement energy retrofits.
- Job Order Contracting has a strong history of dramatically increasing use of small, local businesses. A report prepared by the Financial Research and Advisory Committee for the Chicago Board of Education in Chicago stated, "M/WBE participation for the BOE JOC program has an aggregate total participation of 51% versus 16% for the traditional Board method."

3) Reduced ability of public agencies to execute labor and contract compliance.

Comments: JOCs reduce the ability of public agencies and other groups to ensure compliance with labor and contract requirements such as prevailing wage. Labor compliance and contract compliance for JOC projects are very difficult and are often not done. Because contractors are doing work on a short time-frame and on an "on-call" basis for many different projects, it is very difficult to create a compliance structure that can track all of this work over a geographic area.

Response:

- All San Francisco JOCs are governed by local prevailing wage laws, including those used by the energy retrofit program;
- San Francisco has a vigorous enforcement of such laws, including use of electronic payroll reporting, and a permanent enforcement agency employed by the City.
- Labor compliance and contract compliance in a JOC/IDIQ contract is easily accomplished. The process is very transparent allowing all parties to know when jobs are being developed, constructed, and closed out.
- San Francisco's JOC contracts include the same Local Business Enterprise (LBE) subcontracting goals, and the same Local Hire provisions as non-JOC contracts.

4) Bonding requirements that exclude many contractors.

Comments: The San Francisco Public Utilities Commission JOC program listed a cumulative value of \$4.5 million for one JOC contract. In order to bond this type of contract, it would tie up the bonding capacity for all but the largest contractors.

Response: The SFPUC program typically initiates contracts with a value of \$1 to \$3 million with bonding requirements matching the initial contract amount. Bonding capacity is increased as contracts are modified accordingly up to the contract limit of \$4.5 million. In addition, initial bonding requirements were occasionally lowered for smaller contractors and staged in concert with work assigned. Bonding requirements have never prevented smaller contractors from participating in the program.

Comments: JOC requires that contractors carry bonds for very large contract amounts without actually knowing specifics on what the actual projects are.... JOC excludes many contractors, especially small and medium-sized contractors who do not have high bonding capacity.

Response:

- There are currently JOC/IDIQ contracts in the state of California that do not require the contractor to maintain an umbrella bond. Each individual project requires a bond at the time of award.
- Under the project bond model, the contractors are reimbursed for the cost of the bond. The Southern California Energy Network, led by Los Angeles County, will be using this bonding model and therefore does not anticipate any barriers to entry for interested contractors.

Comments: Bond companies typically charge more to bond contractors, such as JOCs, that have many unknowns.

Response: This statement is false. Bond companies understand that Job Order Contracts have historically low default risks compared to other types of construction methods. The bond prices are competitive and factor in this lower risk under the JOC model. Bonding companies are much more focused on the financial and performance viability of the individual contractors when assessing risk.

5) Reduced workforce development opportunities.

Comments: JOCs generally do not contain language on workforce development and workforce standards, so the public agencies and ratepayers lose out on opportunities to have their public investments generate quality jobs outcomes. Especially considering the random nature of projects in a JOC and the many unknowns about those projects, it is difficult to have workforce development programs coordinate with JOC programs. In addition, public agencies have historically used public works projects to create local jobs, to focus on unemployed workers from disadvantaged communities, and to require high

training and safety standards of workers. The JOC model does not have a strong record of incorporating these types of public benefits outcomes and investments. Public agencies who consider using JOC should be made aware of the workforce issues stated above.

Response: Job Order Contracting has a strong history of dramatically increasing use of small, local businesses and creating local opportunities. All studies show that the results are better than other processes. Most JOC programs in the state of California have a local hire program written within the contract requirements.

A report prepared by the Financial Research and Advisory Committee for the Chicago Board of Education in Chicago stated, “M/WBE participation for the BOE JOC program has an aggregate total participation of 51% versus 16% for the traditional Board method.”

For the SFPUC funded program specifically, 17 energy retrofit projects in 10 municipal buildings were completed with a total program costs of \$3.6 million, \$3 million of which was from an EECBG grant. (SFPUC Power Enterprise funded the program’s consulting services.) These lighting and HVAC projects made improvements to three neighborhood health care centers, three cultural centers that promote the arts and youth development, three Sheriff’s facilities, and a neighborhood community center. Other important program results included the generation of over 12,000 hours of work for regional construction firms, with the on-site participation of 77 construction workers, and estimated annual energy savings of 1,200,000 kWh of electricity and 90,000 therms of natural gas. The energy reductions translated into decrease annual utility costs of \$197,000 and reduced greenhouse gas emissions of 1,063 metric tons of eCO<sub>2</sub> / yr.

Workforce development for disadvantaged workers and apprentice utilization are legitimate challenges for work scopes made up of multiple retrofit projects – regardless of the contracting vehicle. With projects being small, short duration, and sometimes specialized, work crews are often small; this makes it difficult to use apprentices. (But it should be noted that a regionally based program that employs JOC contractors serving multiple agencies – such as the program underway as a part of The Energy Network led by Los Angeles County - could create a steady pipeline of projects for participating contracts that makes it easier to employ apprentices and create whole career pathways within the various trades.)

Also, non-residential retrofit uses high-skill labor (electricians, plumbers, steamfitters) rather than lower skilled trades (carpenters, laborers), so guiding disadvantaged workers into these extremely competitive union-controlled apprenticeship programs is another challenge. The point here is that these challenges come from the nature of nonresidential retrofit work – they are not unique to JOC. For example, a JOC bid for \$2M of specialized lighting retrofits is little different from a workforce planning standpoint than \$2M of low-bid construction or a \$2M scope for an ESCO (sole source bid) project. This is an area requiring ongoing innovation and cooperation – regardless of the contracting vehicle.

Additionally, there are numerous examples of minority/ women owned / business enterprise participation in JOC:

Housing Authority of Baltimore City

Adopted JOC in 1994

Accomplished over \$286 million in construction

Over 49% M/W/BE participation since 2000, exceeding their goal of 26%

City of Chicago

Adopted JOC in 1992

Accomplished over \$625 million in construction for nine City Departments

Over 46% M/W/BE participation, exceeding their goal of 32%

County of Los Angeles

Adopted JOC in 1995

Accomplished over \$645 million in construction

Over 37% M/W/BE participation, exceeding their goal of 20%

District of Columbia Housing Authority

Adopted JOC in 1996

Accomplished over \$249 million in construction

Over 49% M/W/BE participation, exceeding their goal of 25%

Chicago Public Schools

Adopted JOC in 2004

Accomplished over \$214 million in construction

Over 41% M/W/BE participation, exceeding their goal of 30%

Finally, by utilizing the project delivery approach that will be used by the Southern California Regional Energy Network, retrofit work can be awarded and organized on a regional basis, under a single program which can support: 1) greater coordination between the applicable apprenticeship system and the pool of JOC contractors; 2) greater coordination between college technical training and education programs; and 3) greater integration of existing workforce development training and support services. The collective impact of these efforts through greater concentration of retrofit work under a single program could conceivably lead to the planning and creation of whole career paths within both the trades and technical/engineering professions. It may also provide greater opportunities to support and carefully shepherd smaller contractors into the energy efficiency industry as the program (and industry) grows, thereby creating more supportive conditions for their success beyond just training.

- 6) Low bids from contractors may put project quality at risk.

Comments: When there is high pressure for contractors to bid on projects that are unknown to them at the time of bid while also bidding low to be competitive, contractors will have more incentives to cut corners with regards to job quality as well as worker compensation/training in order to stay competitive.

Response:

- A 2006 Northern Arizona University survey of JOC users across the United States found that 87.8 percent of participants found JOC to provide the same or better quality work than the most likely alternative, and more than 70 percent found JOC to be easier to use.
- The JOC process aligns project owner and contractor goals by allowing for the prospect of future work through a long-term contract.
- Most JOC contracts have a performance requirement for the participating contractor to meet or exceed, which does not allow them to cut corners with regard to quality, workers compensation, or training.
- JOC contracts are essentially performance based. Contractors are guaranteed only a minimum amount of work and thus have an incentive to perform high quality work in order to continue receiving projects.

7) JOC bid process can be confusing.

Comment: Bids based on a multiplier score can be confusing for many contractors who are not familiar with the model. This may also result in lower participation for contractors. JOC discourages the participation of local and small contractors, due to: a) Lack of knowledge about JOC solicitations and bidding; b) Inability to compete with large companies that have knowledge and ability to craft a low price multiplier.

Response:

- For the San Francisco Program larger companies with larger overhead costs (especially union shops) bid larger mark ups.
- There may be a small learning curve for contractors new to JOCs. But the SFPUC Program, as well as the process being used by the Southern California Regional Energy Network, includes a series of pre-bid meetings and seminars that walk the contractor through the bidding process including how to develop an accurate multiplier score.
- After obtaining instructions, most contractors find the multiplier score to be very simple. The Construction Task Catalog® prices reflect local prices for measure installation tasks. The contractors simply evaluate these prices and determine how much they need to add to cover their overhead and profit.

8) Larger projects may be broken up into smaller projects.

Comments: JOCs can also result in owners breaking up what is typically one construction project into many "mini-projects."

Response:

- There is no motivation in JOC to either break projects up or combine them. The cost is the same either way.
- In the JOC method, the contractor becomes part of the process. One of the key features of the JOC process is the joint-scope meeting, where the owner, contractor and JOC representative visit the project site and review the details of the work to be completed. They discuss and resolve any issues or problems up front. The size and scope of the project is flexible but ultimately determined by the owner. The meeting provides an

opportunity for open communication and minimizes the confusion that often leads to change orders. Because details are worked out in advance of project commencement, a joint scope meeting helps minimize later disruption of the schedule from incomplete or incorrect construction specifications.

- It should be noted that while commenting parties advocate for a contracting structure that favors small business, they concurrently disavow the JOC model because it creates smaller ‘mini-projects’. The SFPUC model did create, by program design, a structure where specialty trades could bid on a scope of work aligned with their core service offering, rather than bidding on a scope suited for a general contractor or for multiple trade companies. This also lowered bonding requirements and allowed smaller contractors to be more competitive. For lighting projects, Enlight, Delta, Torres Construction and Fluoresco all won bids, and these are small (Enlight, Delta, medium and large companies, respectively).
- The comments critique JOC-based programs for being too disaggregated (“mini-projects” that impede bulk purchasing and workforce development planning). Paradoxically, these same comments portray JOC-based programs as too “bundled” (e.g., large contracts that exclude small contractors, requiring bonding for +\$1M contracts, etc.). SFPUC energy efficiency staff, after having implemented more than 90 local government retrofit projects over the last five years, and based upon their professional experience, believe these problems have to do with the fundamental nature of nonresidential retrofit work, not the particular contracting method, and that JOC based programs actually offer solutions these problems rather than causing them.
- For context, one must recognize that implementing nonresidential building energy retrofit at scale entails a long series of smaller-sized commercial custom-construction projects (i.e., “mini-projects”). Each existing building presents a puzzle of original system design, years of incremental modifications, maintenance neglect and fixes, legacy control systems, and many additional complexities. Retrofits are almost always customized solutions. This work will consist of many individual projects with on-site construction durations measured in days or weeks, not months and years. The image of large scale construction mobilization and very large work crews - the norm in most new construction - is not applicable to the vast majority of energy retrofit projects.
- Bundling of public agency energy upgrade projects is typically a more cost-effective approach. For each public agency to go to bid multiple times for each individual project element is both implausible and impractical. In San Francisco, using the non-JOC process, each bid package requires a 500 page bid document, 6-to-9 months of administrative process, and very significant transaction costs. Accordingly, it makes eminent sense for public sector projects to be bundled and implemented at scale, but still at a scale that many small contractors will have the ability to bid on. JOC, therefore, is an efficient method for creating a bundled contracting option that is well-matched to the nature of the work, and one that provides ample opportunities for smaller contractors to participate.
- JOC contracting for specialized energy retrofit catalogs offers a competitively bid, streamlined and flexible contracting tool.
- Bundling an equal size contract for an equal number of retrofits into a traditional public works low-bid construction contract is a much longer process and presents the familiar challenges of protecting against “low-bid quality” and “gotcha” change orders.

- Bundling projects for performance contracting typically involves even larger contracts, less transparency, and no competitive bidding (thus no bidding opportunity for small businesses at all unless employed by the ESCO).

9) JOCs have requirements for product utilization.

Comment: “JOCs typically have specific requirements regarding the utilization of products that are only made and distributed by one manufacturer, which means that contractors and public agencies are beholden to that manufacturer's/distributor's product lines. This can also potentially increase costs under JOC programs by limiting competition between manufacturers.”

Response: This comment is untrue. Performance specifications are used to identify appropriate quality and type of products needed, not vendor specific requirements. Substitutions can be made for products that meet those specifications, with approval by the owner. Further, any product not found in the comprehensive catalog can be added as a “non pre-priced” item and paid for “at cost” plus a pre-agreed mark-up, with the approval of the owner.

## V. **Recommendations**

We recommend that the CEC retain the Key initiative that reads “Develop a municipal building job order contracting process similar to the model developed by the San Francisco Public Utilities Commission” found within the Voluntary Pathway 4: Public Sector Leadership, page 56 within the CEC AB 758 *Draft Action Plan* and future iterations.

We recommend that the concerned parties and JOC Program Administrators begin collaborating to identify additional pathways that align energy efficiency retrofit work with workforce training, economic development programs and public benefit opportunities. We recommend that this discussion be part of any AB758 implementation workshops on workforce development and in the CPUC sponsored Workforce Education and Training activities which were funded as part of the 2013-14 Energy Efficiency Decision. We welcome the opportunity to work together to grow the energy efficiency industry in ways that benefit all stakeholders and the public good as a whole.

Respectfully submitted,

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