

The following list includes a compilation of general program recommendations discussed at the CEC/Green Stimulus Energy Coalition meeting on April 14, 2009. The Coalition looks forward to working with the CEC to develop implementation details for the following ideas and to define the appropriate mechanisms needed to successfully implement these programs. The recommendations below are guided by our attached overarching CA Green Stimulus Coalition policy recommendations.

I. Retrofit Ideas

Fund a Performance Based Whole Building Audit and Retrofit Program

The State Energy Program (SEP) funds could be used to pilot a statewide performance-based whole building retrofit program by providing a rebate to building owners and contractors who reduce energy and water usage by a certain percentage. This would require two audits: the first audit would determine the baseline for quantification of energy savings and the second audit would confirm the final level of energy savings.

For residential energy efficiency applications, both audits should be performed by a RESNET, California HERS II, or equivalent certified third party rater. For non-residential applications, audits and verifications should be performed by licensed professional energy engineers or certified independent measurement and verification firms who are certified by organizations that are American National Standards Institute (ANSI) approved in accordance with ISO 17024 standards.¹

Furthermore, to ensure the use of a comprehensive approach to reach significant energy and water savings, all energy efficiency building retrofit projects that receive ARRA funds must be designed to bring existing buildings up to the current 2008 Title 24 Building Energy Efficiency standards. Retrofitted buildings that attain documented energy and water savings as compared with the building in its original state would receive a two tiered rebate:² (1) the building owner would get a more immediate rebate as a reward for implementing the whole building retrofit design and (2) the installing contractor would get a 'bonus' rebate when the completed work is documented by an independent third party verifier.

This would encourage a more comprehensive³ whole-building approach as the property owner and contractor would need to consider the entire building as a single opportunity and implement particular measures that best complement one another to achieve the targeted percentage of savings in the most cost-effective manner.⁴ In addition, this could also properly incentivize the contractor to most effectively implement the upgrades

¹ The CEC could solicit contractors through an RFP to create an 'eligible installer' list based on criteria similar to those listed above (See NYSERDA PV eligible installer - <http://www.powernaturally.org/Programs/Solar/Installerspv.asp>)

² An alternative would be to allow the contractors to get the incentive and then offer building owners a reduced rate for the retrofit. The work would still need to be audited by a third party rater.

³ Comprehensive measures to be considered include insulation, heating, appliances, hot water, lighting, and basic education about energy savings practices that cost nothing and save money (e.g. turning off unneeded lights, home office equipment, etc).

⁴ This approach could also utilize existing prescriptive incentive programs currently run by the utilities.

(therefore improve quality of retrofits in general) if their payment were tied to third party verification.

This program should be structured similarly to any program being pursued at the federal level to allow for the use of federal funding to replace SEP funding, should a federal program be initiated. If such a pilot is successful, this model could also potentially be incorporated into the next utility program cycle, thereby continuing this program without the need for ARRA funds.

Fund Neighborhood Retrofit Pilot⁵

By leveraging available incentives from existing energy and water efficiency programs, as well as available funding opportunities, the neighborhood retrofit model would achieve deep energy and water savings for an entire area, improve impoverished communities, and create jobs at the source where jobs are needed the most.⁶ The SEP funds could provide the funding necessary to carry out a number of pilots throughout the state to see how this program model could ultimately be scaled up.

In particular, the funds would support the necessary implementer⁷ who would (1) convene local stakeholders, including (but not limited to) neighborhood residents, community-based organizations, contractors/industry, building trades unions and apprenticeship programs, and local educational institutions and workforce development providers, to win buy-in from all parties to develop an effective pilot (2) determine the best suited neighborhood to be a pilot⁸, (3) analyze the energy and water needs of a particular neighborhood, (4) determine all applicable program incentives and funding currently available, (5) conduct outreach that accounts for language disparity, and (6) determine the most effective implementers to accomplish the comprehensive water and energy upgrades.

In addition, the implementer would ensure effectiveness by using performance-based evaluations by third party raters, which would also improve the quality of installations for the low-income communities. To attract potential investors and other organizations to fund and carry out similar programs post-ARRA funding, the program manager for each pilot would be responsible for developing a report detailing the program structure, comparative analysis of before-and-after energy and water usage data to illustrate actual savings, the economic savings that will accrue as a result of this program, number of households served and sociodemographic information on those households, jobs created (job-years), skill and wage classifications, and number of local residents enrolled in related training programs who obtained employment or work experience in the pilot program.

⁵ This could be adapted to address foreclosed homes as well.

⁶ Jobs could pull from local job training centers as well as tap into local leaders, outreach coordinators, etc.

⁷ An implementer could include a local government (or a partnership between a nonprofit and/or 3P and the local government), a non-profit, a broader coalition, etc. Discussion of the pros and cons of the various models could be incorporated into the CEC implementation planning phase over the next few months.

⁸ This would naturally depend on both the feasibility of particular neighborhoods as well as on the level of capacity and particular interest of the organization/LG running the program. This process should be transparent to allow for stakeholder participation.

Attached are two examples of program designs that are currently being developed to accomplish the aforementioned goals. The “Green Leep” program, supported by a consortium of Bay Area Governments and Community-Based Organizations, and The Greenlining Institute’s “Green Our Neighborhood” program both target low and moderate income neighborhoods. These programs also have the potential to integrate the neighborhood retrofit model approach with local job training programs. (*See attached “Green Leep Fact Sheet March 2009 and “Greenlining - Green our Neighborhood” for more information*)

Although this program relies on existing funding and incentive programs, adequate analysis of potential neighborhoods and the development of effective outreach strategies will require significant preparation time. Therefore, this program would be able to roll out by the Department of Energy (DOE) deadline for the allocation of funds, but will not be as readily deployable as other strategies. However, the timeline for this program design and implementation allows sufficient time to train the local workforce to be adequately prepared to implement upgrades when the project comes on line.

Creating Projects At-Scale

Where applicable, energy efficiency and renewable energy projects should be designed to take advantage of economies of scale by aggregating individual projects (such as retrofitting entire blocks or neighborhoods) rather than one house at a time. By reducing transaction costs and bundling small jobs into bigger projects, energy efficiency programs can achieve the maximum possible scale while establishing an industry that maximizes long-term, high quality job opportunities with connections to workforce training programs.

The Green Jobs/Green Homes Campaign proposed by the Center for Working Families in New York is an example of such a project. This model is a partnership between environmental, labor, workforce development, affordable housing, and community development stakeholders to support the creation of a state program to perform one million green residential retrofits in five years. The program aggregates jobs into bundles of houses to lower transaction costs and allow higher-skilled workers to be deployed over several projects. (*See link below and/or attached “Center For Working Families Green Jobs Green Homes NY”*)

<http://www.centerforworkingfamilies.info/cleanenergygreenjobs/CWF%20GJGH%20Policy%20Brief.pdf>

Establish Standards for Residential Retrofit Programs

There is a significant need to establish standards for residential energy efficiency projects since programs vary greatly in terms of the retrofit measures they undertake. Standards would ensure that deeper energy savings are achieved beyond basic lighting upgrades and that all projects meet specific quality guidelines.

As noted above, to ensure that any effort to retrofit or renovate an existing building uses a comprehensive, integrated approach to capture the full energy and water savings potential for each building, energy efficiency building retrofit projects that receive ARRA funds

must be designed to bring existing buildings up to the current 2008 Title 24 Building Energy Efficiency standards. Weatherization of residences should include a comprehensive number of measures, such as (but not limited to) HVAC duct system leak testing and sealing, heating, appliances, hot water, lighting, and basic education about energy savings practices that cost nothing and save money (e.g. turning off unneeded lights, home office equipment, etc).

As noted throughout the document, the most effective way to achieve these goals and improve the quality of installations is to link payment to contractors, implementers, and community based organizations, to the verification carried out by a third party rater (See first recommendation above for more detail on third party raters). Therefore, we recommend that all projects that are linked to ARRA funds should be required to be independently verified (pre and post) to ensure high quality standards to maximize expected energy and water savings.

Support Training to Improve Code Compliance

The federal American Recovery and Reinvestment Act of 2009 requires assurance of achievement of at least a 90% compliance with the state's energy codes to obtain SEP funds (H.R. 1 § 410 (a)(2)(C)). The U.S. Department of Energy SEP fund expenditure guidelines state that establishment and enforcement of energy efficiency building codes and standards are a priority use of funds that have great potential to achieve the overall goals it has specified (page 27). Moreover, increasing compliance with the energy codes meets the CEC's job development objective by encouraging employment of trained, career-track workers.

Studies show that there is a serious need to improve in-field compliance with the CEC's energy codes. While the Quantec "Statewide Codes and Standards Market Adoption and Noncompliance Rates" report released in May, 2007 shows non-compliance rates from 25 to 100 percent depending on the measure, the CEC and others use a rule of thumb of 70 percent compliance. To meet the requirements of the ARRA, we recommend that the CEC use a portion of the ARRA funds to help reach at least 90% compliance with the state's energy efficiency codes and to ensure that all energy efficiency retrofits of existing buildings are carried out according to code.

The CEC could use SEP funds to support programs that train local code authorities, builders, licensed contractors and workers to implement the current energy code requirements. To achieve short and long-term compliance, the CEC could develop and implement a program to train and aid building departments to obtain sufficient certified plan checkers and field inspectors to process energy efficiency code compliance. Seeking out and partnering with entities that already have successful training programs would minimize expenditure of SEP funds.

II. Workforce Development

Address Displaced Workers

The California Labor Federation's Workforce & Economic Development Program (WED) offers a dislocated worker program that helps connect dislocated union workers with public-funded workforce, training, and education resources. The CEC could explore working with WED to ensure that projects tap into the currently dislocated workforce. *(See website: <http://www.calaborfed.org/issues/layoffhelp.html> and attached fact sheet *WED Layoff Role AFL-CIO*)*

Prioritize Quality Job Creation and Directly Link Jobs to Career Training

All policies aimed at building the clean energy economy should explicitly link new green jobs to career ladder training and apprenticeship programs:

- Retrofit programs should include mechanisms and requirements to employ trainees and graduates of certified apprenticeship training programs and of high-quality and well-funded career ladder training and education programs.
- Energy-related construction projects funded or supported by ARRA funds should be covered by Project Labor Agreements which include apprenticeship utilization requirements linked to local first-source hiring.
- Programs designed to directly assist households or businesses in adopting clean energy technologies should include standards and mechanisms to connect jobs created to high-road workforce development. For example, under an expanded Weatherization Assistance Program, weatherization agencies and contractors could provide employment and work experience to trainees enrolled in pre-apprenticeship/apprenticeship programs or other federally-funded, high-road training programs, partnering with the trainers to turn out workers skilled in home energy efficiency and agreeing to provide those workers with a high standard of compensation and career ladder opportunities.

Local First-Source Hiring: One policy tool for linking local job creation to training is local first-source hiring. Local Hire Agreements should be incorporated into or drafted simultaneously with Project Labor Agreements. Local hire agreements should be developed in collaboration with community-based organizations, labor unions and workforce development entities in the region where a project is located and should include targeted hiring goals for disadvantaged populations and individuals with barriers to employment.

OMB guidance on ARRA implementation (issued April 3, 2009) addressed local hire:

- "Promoting local hiring: Departments and agencies should seek to maximize the economic benefits of a Recovery Act-funded investment in a particular community by supporting projects that seek to ensure that the people who live in the local community get the job opportunities that accompany the investment.
- Engaging with community-based organizations: Agencies should seek to support projects that make effective use of community-based organizations in connecting disadvantaged people with economic opportunities."

Model Construction Career agreements (attached) developed in Los Angeles and in San Jose provide detailed specifications for tying a Project Labor Agreement to targeted hiring of local residents enrolled in job training and career education programs. (*See attached “Model Construction Careers Agreement San Jose & Model Construction Careers Agreement LA”*)

Link Aggregated Retrofit Programs to Local Workforce Needs

As noted above, there is significant potential to link available local job training centers to potential home, neighborhood, foreclosed home or commercial retrofit programs. This would ensure that the neighborhoods in which the retrofits take place would pull potential workforce candidates directly from their community. The benefits of this coordination would include reduced greenhouse gas (GHG) emissions from decreasing the need for worker transportation, economic revitalization in struggling communities, permanent emissions reductions and energy and water cost savings, and long term systemic change in local communities.

Funding from SEP would support the coordination of organizations that would potentially carry out the neighborhood retrofit model pilot with those existing local job training centers or organizations. In addition, SEP funding could support existing training programs that would likely need to scale up for this effort.

For this coordination to succeed, neighborhood retrofit programs must include assurances that contractors carrying out the retrofits will hire worker and trainees who are participating in community workforce development programs. This could be accomplished through a Construction Careers Agreement covering all work to be done under the pilot program.⁹

Support Bridge Programs to Advance the Existing as well as a New Workforce

“Bridge programs” incorporate basic skills education (including math and English) and help provide access for new and under-skilled workers to access career ladder jobs. Moreover, programs that link basic skills education with occupational and academic education in the classroom is a program design called “contextualized” or “integrated” basic skills education. This approach has proven to significantly accelerate learning and improve student success in individual California programs where it has been implemented. SEP funds could support efforts to expand and scale up such programs.

At the same time, the CEC should work closely with private employers, Workforce Investment Boards, labor unions, and community colleges to link all training funded through the SEP and other programs to existing or (where necessary) new certifications that will be recognized by industry, including community college certificates and apprenticeship training programs accredited by the Division of Apprenticeship Standards. Training programs that receive ARRA funding must clearly link to existing quality jobs

⁹ As noted above, two sample Construction Careers Agreements from Los Angeles and San Jose are attached. Since these models cover public works projects, they would need appropriate modifications to be applied for a neighborhood retrofit program.

to ensure that workers who are being trained will be adequately guided and/or matched to actual jobs in the workforce.

Below are two examples of career ladder programs currently underway in California:

- Career Advancement Academies: One model program that is already in place at several community colleges is the Career Advancement Academies (Academies). As noted in the attached fact sheet, “these structured programs address the considerable gap between the academic and technical skills needed by employers and the preparation levels of many Californians. They provide students the skills and support they need to move to the next rung of the educational and career ladder.” The East Bay Career Advancement Academy at Laney College is part of the PG&E Power Pathways program. Certain Academies also cover carpentry and other construction-related fields. The Colleges System Office is considering expanding this approach and there could be a great opportunity to partner with them. The attached document gives a brief introduction to the Academies For more information, contact Linda Collins at the Career Ladders Project (lcollins@careerladdersproject.org) or Carole Bogue-Feinour at the CCC System Office. (*See attached “Career Advancement Academies Fact Sheet”*)
- Advancement of the Current Workforce: The California Construction College (a partnership between the community college San Jose City College, the 4-year university National Labor College, and a local labor-community-educational consortium) is developing a model to offer training for experienced construction workers to become either managers or instructors themselves. The benefits of this approach are threefold: (1) it expands the career ladder within the construction industry, providing pathways for incumbent workers to advance to become managers, educators or start their own company (2) it helps meet the demand for experienced instructors and manager, and (3) as incumbent workers move up, it opens job opportunities for entry-level workers, which allows for more apprenticeship spots for community members. (see the SJCC website for further information – <http://www.sjcc.edu/Acad/special/ccc.html>)

Include support services in the development of workforce programs

Supportive services – especially counseling, financial aid and academic advising — are essential to helping many adult learners succeed through training, and are particularly important for those potential workers coming from disadvantaged backgrounds. Workforce Investment Boards (WIBs) can fund certain services (including the above and in some cases living expenses) while clients are in training. SEP funds could potentially be provided to the WIBs to expand these support services. Therefore we recommend that grant guidelines should allow for spending funds outside of the classroom on the supportive services that enable workers to find, enter, complete, and succeed in training.

III. Financing options

Help Cities and Counties Roll Out AB 811 & Mello-Roos Financing Districts

Cities, counties, and other entities (such as Joint Power Authorities) need support to quickly and efficiently rollout AB 811 or Mello-Roos financing districts to fund EE/RE for residential and commercial buildings. There are several types of support the state can offer:

- Offer grants to cover city/county staff time to get the program off the ground; e.g. 1 FTE for a year.
- Consider hiring a firm to walk interested local governments (with a focus on counties to increase economies of scale) through the set-up process as there are significant legal, financing, and administrative redundancies in setting up an AB 811 or Mello-Roos financing program in multiple localities. Local governments could still shape the program, but would get all the legal, financial and administrative templates they need to streamline the adoption process.
- Develop a standard offering for what EE measures might qualify for funding. Cities and counties are struggling with how to create standards for EE, whereas the California Solar Initiative (CSI) is easy to plug into.

Create a Low-interest Loan Product for those without Access to AB 811 or Mello-Roos Financing

Many states have low interest loan products offered through third parties. SEP funds could be used to expand or seed similar third party programs in California if having the CEC administer loans is not feasible. These loans could potentially be linked to the utility customer bill, thereby achieving a similar model to on-bill financing (OBF) while avoiding the complications that prohibit the utilities from offering OBF to residential customers. Pennsylvania, New York and Vermont all offer traditional financing options that can be duplicated in California.¹⁰

- Interest Buy-Downs: Although administratively more complex, New York and Vermont offer an interest rate buy down through local banks. The CEC could provide interest rate write downs and/or a reserve fund to significantly lower the interest rate.
- Third-party loan providers: In Pennsylvania, one provider works closely with RE/EE contractors to offer financing. In California, Viewtech Financial Services has offered EE loans for many years in Southern California (3,000 loans issued in 2007) and this program could be expanded.
- ME2: Me2 uses both public monies and private capital for building retrofits. Costs will be fully repaid by program participants via charges on their utility or municipal services bills, but on a schedule that allows them immediate savings. If a participating owner sells the property, the obligation goes to the new owner

¹⁰ The noted cases for NY, VT, PA and CA (as well as others) can be found in the attached “Enabling Investments in EE” or at: http://www.ucop.edu/ciee/energyeff/documents/CA_ResiFinancing.pdf

or is wrapped into the sales price. This design minimizes risk to both participants and creditors. (*See attached ME2 Wisconsin Summary*)

- Long Island Green Homes: The town of Babylon, LI expanded the definition of solid waste to include energy waste, based on its carbon content. Therefore, the energy-efficient improvements to homes serve a vital purpose, remediating the environmental damage caused by leaky and inefficient homes. The Town will provide for energy saving improvements up to \$12,000 per home and the homeowner will pay for the improvements through a monthly benefit assessment fee. The amount of the monthly benefit assessment fee is structured to be less than the monthly savings on a resident's energy bills resulting from the energy-efficient improvements. The Town will charge a 3% administrative fee which will be built into the monthly payments residents will make to pay for the improvements. (*See attached LI Green Homes How it Works and FAQs*)

Expand the On-Bill Financing Mechanism to Address Renters

Reaching the rental community has been a significant challenge for a number of reasons. AB811/Mello-Roos financing may be slightly more attractive to rental property owners than other options, but this type of financing will not likely motivate rental property owners on a large scale. The only financing program that might directly address the principle-agent barrier is a Tariffed Installation Program (TIP) where the repayment is attached to the meter, but existing TIP programs have yet to show a significant response from tenants or property owners. Providing funding for renters will most likely be best achieved through a TIP program/on-bill financing mechanism wherever renters are responsible for their electricity bills and the continued payment is linked to the location instead of the customer. As noted above, model could be carried out by a third party loan provider thus avoiding the complications that inhibit the utilities from offering OBF to residential customers.